UNIVERSITY OF VAASA

FACULTY OF BUSINESS STUDIES

DEPARTMENT OF ACCOUNTING AND FINANCE

Tino Sievänen

FAMILY OWNERSHIP AND FIRM PERFORMANCE

Evidence from the NASDAQ OMX Helsinki from 2007–2013

Master's Degree Programme
in Finance

VAASA 2015

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UNIVERSITY OF VAASA
Faculty of Business Studies
Author: Tino Sievänen
Topic of the Thesis: Family Ownership and Firm Performance: Evidence from the NASDAQ OMX Helsinki from 2007–2013
Name of the Supervisor: Vanja Piljak
Degree: Master of Science in Economics and Business Administration
Department: Department of Accounting and Finance
Master's Programme: Master's Degree Programme in Finance
Year of Entering the University: 2010
Year of Completing the Thesis: 2015 **Pages: 62**

ABSTRACT

The purpose of this thesis is to find if family ownership in companies has an effect on firm performance in Finnish NASDAQ OMX Helsinki stock exchange listed companies during 2007 to 2013. Furthermore, the thesis studies if family ownership leads to better performance than other ownership structures. The topic is current because academic empirical research has focused on the topic only for the past decade and mainly during booming years.

Family ownership is one of the most common ownership structures in the world and they have common specific features. The families try to retain the control of the company, they are usually risk averse and the family companies usually have on average longer investment horizons than other companies. Families usually have most of their wealth invested in the company and see their company more as a heritage to their descendants and therefore are not so interested in short-term firm performance.

Because of the specific features of family firms, the effect of family ownership on firm performance can be studied with the help of agency theory. Can the firms lower the agency costs by acting both as the owner and the management? Furthermore, do the conflict of interest and the costs of families striving for private benefits stay at a reasonable level and thus not harming the firm performance?

By utilizing hand collected panel data from Finnish listed firms during 2007–2013 and random effects GLS regression, this research shows evidence that listed family owned firms do outperform other firms when measuring performance with accounting performance ratio ROA and when observing against other listed firms in general. Unlike in previous international studies, no evidence for so-called founder effect could be found from listed Finnish family firms. Furthermore, when identifying other controlling shareholder blocks, no evidence of outperformance by family firms could be found.

KEYWORDS: Family Ownership, Return on Assets, Tobin's Q, Firm Performance, Corporate Governance, Panel Data

1. INTRODUCTION

1.1. Background, Motivation and Previous Main Studies

Firm value is a major topic in financial discussion. Investors analyse a variety of factors to find the firms that consistently perform above average. One of these explaining factors is ownership structure. In the modern day world a large amount of the publicly listed companies, are owned by a wide range of shareholders. This may lead to problems when managers are not monitored well enough. Managers in a diversely owned company may be able to pursue their own interests and maximize their own value in the company, while discarding the real mission of their job – maximize firm value. Managers may eat the profits of corporations for their own personal benefit. An example of this might include flying with private jets or eating in expensive restaurants. With behaviour like this the managers lower their firm value. This is known as the agency problem, where the firm owners and the managers have conflicts of interest. Shareholders often try to solve the agency problem by trying to combine the interests of shareholders, with the interest of the company's agents (the managers). This can be done by making the managers owners of the company or interested in the market value with a help of performance bound bonus structures or option contracts. However the functionality of these compensation plans may be questioned. It can be argued that for example that the recent financial crisis started from poor managerial decisions. (Brealey, Myers & Allen 2011: 290–298.)

Family owned companies are defined as companies where the founder or a member of the founder's family acts as an officer, director or owns a significant amount of shares of the company as a group or alone[1]. Several recent studies have analysed the relationship between firm performance and family ownership. Family owned firms have unique features that distinguish them from firms with other companies with different ownership structure. The academic literature has debated if the ownership structure has an effect on firm value. For example Berle and Means (1932) suggest that concentrated ownership structure should correlate positively on firm performance, while Demsetz (1983) suggest the opposite. Bearle and Means (1932) and Jensen and Meckling (1976) also discussed two agency problems. A large shareholder has a greater interest in

[1] Definitions of family ownership differ in the academic literature. The definition provided is chosen based on the definition of family ownership by the Finnish Family Firm Association. The definition is in line with the definition used in the recent empirical research from the topic (see for example Villonga & Amit 2006, Anderson & Reeb 2003 and Anders 2008)

monitoring the managers but at the same time they may take advantage of their position to gain extra benefits at the expense of the smaller shareholders. If the ownership is divided to a larger portion of smaller investors, the agency problem of large shareholders taking advantage of the smaller shareholder diminishes, but at the same time monitoring of the managers is also minimal. However if the large shareholder is a family or an individual the monitoring of the managers is high but the risk of the large shareholder taking advantage of the smaller shareholders is also higher. The question here is which one of the two agency problems leads to bigger costs and has a greater negative effect on firm value?

Previous studies have confirmed the so-called "founder effect". This is a phenomenon where the founder, acting actively within the company, has a positive impact on firm performance. Confirming results have been shown in the US from, for example Anderson and Reeb (2003), Villalonga and Amit (2006) and Pérez-Gonzáles (2001). Anderson and Reeb (2003) found that in the S&P500 family controlled firms perform better then widely held firms do when a descendant acted as the CEO. Furthermore, they found that when the founder acted as the CEO of the company, it seemed to have the strongest positive effect on firm value. Consistent with these studies, Villalonga and Amit (2006) established that when the founder acted as the CEO or as chairman of the board with a hired professional CEO, firms tended to trade at a premium amongst other Fortune 500 companies. However Villalonga and Amit (2006), and Pérez-Gonzáles (2001) findings of the descendant-CEO were inconsistent with findings from Anderson and Reeb (2003). They found that descendant-CEO's have a negative effect on firm performance. Moreover, consisted with the US findings, Maury (2006), Barontini and Caprio (2006), Sraer and Thesmar (2007) and Anders (2008) found that family activity leads to better performance in the Western European countries.

Family ownership and control is a common feature in the world. For example La Porta (1999) showed that in worlds 27 wealthiest countries, depending on the size of the company, 30–50% of the companies were family owned and controlled. Furthermore, Faccio and Lang (2002) showed that 44.29% of Western European companies were family owned and controlled. Moreover Claessens, Djankov and Lang (2000) found that family companies account for over half of all companies in the Eastern-Asian markets. Even though academic literature regarding firm ownership structure and agency theory is relatively old and goes back to the 1970s, the empirical academic research on the topic has only recently gained attention. One explanation for the lack of older research is presented by Bhattacharya and Ravikumar (2001). They showed that the evolution of

efficient capital markets and the sale of family owned companies were positively correlated. More family companies are entering the capital markets and therefore understanding the results of family ownership and performance are a current phenomenon.

1.2. Purpose of the Study and Contribution

The previous studies have mainly focused on comparing founder family firm performance to other companies in general. This study extends these studies and compares the performance of companies with family owned companies to other blockholders, such as government or financial institutions. Moreover, most of the previous studies have not studied the family firm performance during the recent financial crisis or during bad economic times in general. As seen from figure 1, this time period has been a time of slow GDP growth and extraordinary low interest rates and thus makes it an interesting time period to study this topic. This thesis focuses on listed non-financial Finnish companies from 2007 to 2013. The purpose is to answer if family firms are superior in terms of performance during recent slow growth time period in Finland. For my knowledge the used method has not been used to Nordic data. Therefore, this study will contribute to the existing literature by widening to Nordic region. Furthermore, the results will give insight on how family owned companies perform during challenging economic times.

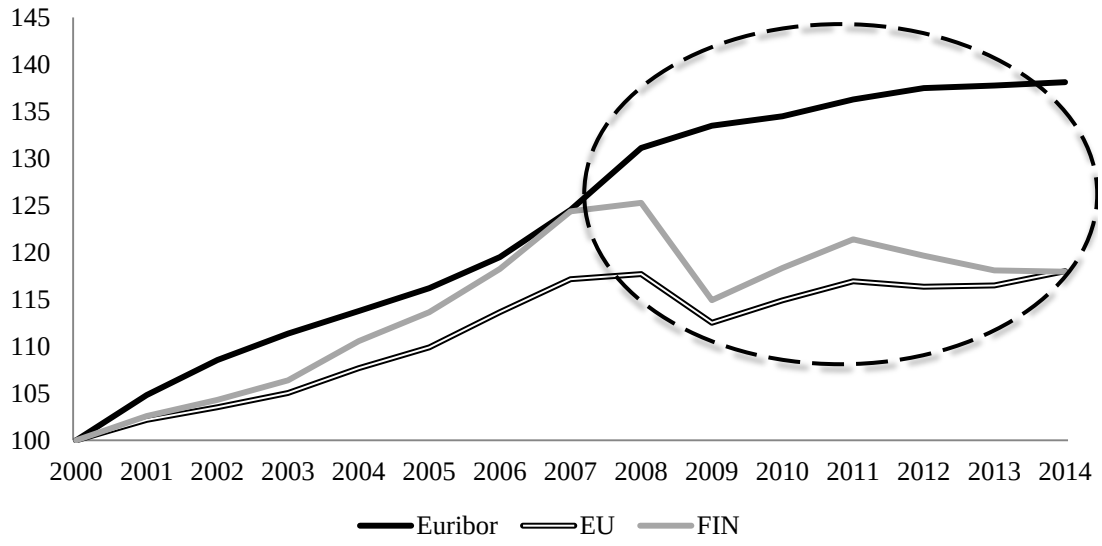

Figure 1: World Bank EU and Finland annual GDP growth and 3-month Euribor.

1.3. Possible Benefits of Family Ownership

Families are a unique type of owners to companies. They have a strong economic interest in the survival of the company, because usually they have a significant part of their wealth invested in the company. In other words their wealth is not well diversified so it is in the interest of the family to monitor the management and the company. In many cases the family owners are also part of the executive board of the company. This leads to minimization of owner-manager conflicts. Long running family owned companies also experience loyalty and trust from their employees and creditors. This leads to lower costs of recruiting, lower cost of debt and long-term commitments to the company. Also the family knowledge of the company and the industry, and their commitment to longer-term investments generates value to minority shareholders. All of the above are examples how family control and ownership reduce agency problems and costs, thus improving the firm performance. (Anders 2008; Anderson & Reeb 2003.)

1.4. Possible Costs of Family Ownership

On the other hand family ownership and control might lead to extra costs to the firm and therefore to a worse performance. The families make decisions that maximize their own interests and these interests might not be in line with the minority shareholders. This might lead to families investing to non-optimal investments. For example because most of the wealth of the family owners are invested in the company, they might try to reduce their risk by diversifying company operations. This is inefficient and usually leads to poorer firm performance and reducing the value of the firm to minority shareholders. The family owners might also try to gain maximum private benefits by paying overcompensation to family members and having unqualified and non-competent family members working at the company. This effect is especially strong if they are working at manager roles. These actions by the owner families grow the agency costs and therefore reduce the performance of the company. (James 1998; Anders 2008; Anderson & Reeb 2003.)

1.5. Family Ownership in Finland.

Companies in Finland are highly concentrated to families and many of the most known and largest Finnish companies are family firms. For example Kone, Cargotec, Fazer,

Ahlström and Sanoma are all family owned enterprises with a long history. According to Tourunen (2009) research of the ownership structures in the Finnish companies approximately 80% can be defined as family firms and they employ 40% of the private sector labor. Of the large and medium sized companies approximately 40% and approximately 25% of NASDAQ OMX Helsinki -listed companies are family owned. In total family firms account for over 20% of the top 500 largest firms in Finland. Tourunen's research shows also that Finnish family owned companies tend to hire more workforce compared to non-family firms when the headcount was compared to the revenues.

Family ownership in companies in Finland show similarities with family ownership in the US and Western Europe. The proportion of workforce employed by family firms is big and thus their significance economically is significant. As Neubauer and Lank (1999) put it, family firms are the backbone of the economy.

1.6. Main Hypotheses

The first hypothesis is the main hypothesis of the study. It answers, whether family firms are better performers than non-family firms. Based on the hypothesis we are able to make conclusions if families are superior to non-family firms.

H_0 = There is no difference between family firms and non-family firms
H_1 = Family firms perform better than non-family firms

The second hypothesis answers if younger family firms perform better than old family firms.

H_0 = Age of the family firm does not have an effect on the firm performance
H_2 = Age of the family firm does have an effect on the firm performance

The third hypothesis answers if the market cap of the family firm has an effect on the performance of family firms.

H_0 = Market cap of the family firm does not have an effect on the firm performance
H_3 = Market cap the family firm does have an effect on the firm performance

The fourth hypothesis answers if founder effect can be found from the sample.

H_0 = No founder effect
H_4 = Founder effect is present

The fifth hypothesis answers if families as controlling blockholders are superior compared to other controlling blockholders.

H_0 = There is no difference between different ownership blockholders
H_5 = Families as blockholders outperform other major ownership blockholders

1.7. Structure of the Study

The structure of this study is as follows. First, I introduce the theoretical background to capital -and ownership structure theories. Second, I will go through the features of family owned firms and give insight to specialties for this group of owners. Third, the main theory, agency theory, from what view the research problem is observed, is introduced. Following agency theory, the previous literature and research of the topic is introduced. Fifth, the data and the methodology used in the study are described and the empirical results of the study will follow. Last, I will summarize and draw conclusions of the study.

2. CAPITAL STRUCTURE

Firm performance is tightly linked to the financial decisions of managers and financial reporting. Therefore, when observing firm performance, capital structure theories and optimal capital structure are important. Capital structure has been in interest of researchers for decades and the main theories regarding capital structure is presented next.

2.1. The Modigliani-Miller Theorem

Modligiani and Miller (1958) started the discussion of capital structure. The original theorem starts from the assumption that a company has a set amount of cash flows. When the company decides the amount of debt and equity to finance its asset, it just divides the set cash flows between debt and equity investors. The underlying assumption is that the investors have equal access to financial markets and thus have the possibility to access leverage or in contrary hedge it away. This leads to the irrelevance of the leverage ratio of the firm when measuring the firm value. In other words, it is irrelevant to investors how the company finances itself.

The original 1958 Modligiani and Miller proposition assumed that there were no taxes, no transaction costs, no bankruptcy costs, equivalent access to information for all parties, debt has no effect on earnings before interests and taxes and as said before investors and companies have equal access to financial markets and thus equivalent borrowing costs. The original study is highly criticised because of these assumptions and thus also Moligiani and Miller extended their study to take into account dividend pay-out ratios and later also taxes. According to these studies dividend pay-out ratios do not affect share prices or total return to shareholders during perfect markets and financing irrelevance theory holds. However, when extending the theory to take into account taxes, Modligiani and Miller acknowledged that increasing debt would have a positive effect on tax savings and lowering the company's weighted average cost of capital. (Modigliani & Miller 1961; Modigliani & Miller 1963.)

As stated above Modigliani-Miller theorems have been highly criticised due to its assumptions and they have been shown to fail under various situations mainly when violating the underlying assumptions of the theorems. However, even though the

Modigliani-Miller propositions do not show a realistic description how to finance companies, they are the basis for the discussion and the development of capital structure theorems. (Harris & Raviv 1991.)

2.2. The Trade-Off Theory

The trade-off theory is an established term to describe a family of theories that started to exists in the aftermath of the original Modigliani and Miller theorem. The connecting factor between these theories is that in all of them the firm evaluates between different costs and leverage plans to achieve an optimal capital structure. The consensus of the trade-off theory discussion is in favour of overweighting debt to achieve tax shield and later adding bankruptcy costs to take into account the rising risk when companies are highly leveraged. The trade-off theories can be divided into two subgroups: static trade-off theory and the dynamic trade-off theory. (Brealey, Myers & Allen 2011: 458-459.)

2.2.1. Static Trade-Off Theory

Under the static trade-off theory a company is assumed to have an optimal capital structure, which is determined by the trading off benefits and disadvantages of using both debt and equity. One of the most common examples of such on the debt side is the advantage of the debt tax shield. The advantage of the debt tax shield arises from the fact that when being more leveraged the company does not pay as much income taxes. In the contrary one of the most common disadvantage examples of debt are the bankruptcy costs, in other words the risk of financial distress rising together with the level of debt. (Brealey, Myers & Allen 2011: 458-459.)

Previous literature has also linked agency costs to the static trade-off theory. The studies show that potential agency costs might arise when using equity financing. Agency theory and agency costs are discussed in depth in chapter 4.

2.2.2. Dynamic Trade-Off Theory

The dynamic trade-off theory differs from the static trade-off theory by having different optimal capital structures for different time periods instead of one static capital structure for all time. For example a company might have different optimal capital structures in different business cycles or periods. In other words in some cycles the company might

need more external financing to finance their operations or investments and thus the leverage ratio tends to be higher during these times than during times with for example lesser investments. The dynamic trade-off theory originates from the studies from Kane, Marcus and McDonald (1984) and Brennan and Schwartz (1984). Both studies analysed the trade-off theory using dynamic time periods and showed that companies optimize their capital structures to maintain high debt levels and thus having tax benefits. The studies took into account uncertainty and taxes but omitted transaction costs.

2.3. The Pecking Order Theory

The underlying characteristic and empirically backed assumption behind pecking order theory is that firms tend to prefer internal financing rather than optimize capital structure. In other words companies prefer to finance their operations and investments primary with internal funds and turn to external financing only when internal funds are insufficient. Moreover, when companies resort to external financing companies tend to use low risk debt financing and share financing as external financing methods. (Donaldson 1961.)

Myers and Majluf (1984) showed empirically that outside investors discount company shares when the companies issue equity instead of debt. This leads into managers naturally avoiding issuing equity and leading into pecking order using internal funds as a primary financing method, risky debt as secondary and lastly issuing equity to finance the company. To finance operations and investments internally, companies tend to retain earnings, when possible, to use on a later date.

Empirical studies have given support for both trade-off theories and pecking order theories. Therefore, it has been difficult to conclude, which of the theories is more effective in the real world (see studies from for example Shyam-Sunder and Myers (1999) and Fama and French (2002)). However worth noting is that, more recently a study from Leary and Roberts (2010) showed that firms are not really using pecking order theory with results showing only 20% using pecking order theory in debt and equity issuance decisions.

2.4. The Market Timing Theory

According to the market timing theory, companies tend to optimize equity issuing during times when their stock is considered overvalued and do share buybacks when the prices are in a more normalized levels. Companies are able to act this way because investors act irrationally (Baker & Wurgles 2002). Empirical evidence from for example Graham and Harvey (2001) support the market timing theory and show that managers are trying to time the company equity issuances during times when company share prices are on a high level to benefit about the timing of the issuance.

Further evidence to the market timing theory is given by Baker and Wurgler (2002). They studied market timing by constructing a market timing measure. The measure was constructed by weighting average external finance needs during past years of the company. They found strong positive and significant correlation between market timing and leverage changes within companies leading to a conclusion of capital structure of the firm being the cumulative result of trying to time the market.

3. FEATURES OF FAMILY OWNED FIRMS

Based on the previous academic literature and the research from family owned firms there are some common features amongst family owned firms. These features help to understand how and why family owned firms act as they do and give an insight on family owned firm decision making behaviour and motives behind them. First the ownership concentration and control-enhancing mechanisms are introduced. Ownership in family owned firms is concentrated to the family and they strive to control the company. The second feature is risk aversion behaviour. Family firms tend to be more risk averse to debt financing and risky investments in research and development. The last feature is longer investment horizons. Family owned firms tend to have longer horizon in their investments, which is explained by their longer commitment to the company.

3.1. Control-enhancing Mechanisms and Ownership Concentration

Large corporations are commonly characterized as companies with a wide ownership. Closer observation shows that there are vast differences with industries and ownership. For example La Porta, López-de-Silanes and Shleifer (1999) studied the company ownership and control and valuation in the 27–wealthiest countries in the world. They found that families owned 30% of the control of large companies when shareholders having more than 20 % of the voting rights were measured and 35% when measured having over 10% of the voting rights. Furthermore, they found that family ownership was the most common ownership structure in smaller companies. The amount of families owned companies were 45% when controlling with having at least 20% voting right level and 53% when having at least 10% of the voting rights. Moreover, Faccio and Lang (2002) found that 44.29% European firms are family controlled. Family ownership was most common in continental Europe and most uncommon in the UK and Ireland. Also Demsetz and Lehn (1985) found that some industries have in average more individual controlled ownership, indicating a strong presence of family ownership in the companies. Consitent with La Porta et al. (1999) study they found that the control of the company is negatively correlated with the size of the company.

Furthermore, De Angelo and De Angelo (1985) study revealed that many of the public firms that have dual classes of common stock had a substantial family involvement.

When a firm has dual classes of common stock, there are two common stocks to choose from. Usually they both have the right to the same amount of cash flow but the voting rights differ. This is a tool for stockowners to have more influence in the company. De Angelo and De Angelo (1985) sample was 45 US based AMEX companies that had dual classes of common stock with same cash flow rights, different voting rights and could not be called back by the company. They found that in almost all of their sample firms' corporate officials and their families focused on owning the share with the superior voting rights. These holdings resulted in a median of 56.9% of voting rights of the companies, but only a 24% right to total cash flows to shareholders. La Porta (1999) noted that the shares with the superior voting rights sold with a premium compared to common stock in the financial markets, emphasizing the value of owning voting rights.

Consistent with De Angelo and De Angelo (1985), Ehrhardt and Nowak (2003) paper examined how German family owned companies try to retain the control during initial public offerings (IPO). They hypothesized that family owned companies might introduce two kinds of shares, one without voting rights and the other with voting rights. Ehrhart and Nowak (2003) examined 105 IPOs between 1970–1990 and found results that supported their hypothesis. Usually, during an IPO, the German Family firms' motives is to sell cash flow rights and not the complete stake of the corporation, thus maximizing the private gains and keeping control of the firm. Moreover Faccio and Lang (2002) found that dual classes of shares are common in the whole Western Europe. Families try to retain the control by both having voting rights with the help of dual class shares and by having different kind of cross pyramid ownership structures in the companies[2]. Consistent results with previous research were also found from Norwegian companies (Mishra, Randøy and Jenssen 2001). Furthermore Claessens, Djankov and Lang (2000) studied the ownership structures in East Asian Countries (Hong Kong, Indonesia, Japan, South Korea, Malaysia, the Philippines, Singapore, Taiwan, and Thailand) finding that significant family control in over half of the companies and a presence of dual classed shares with different voting rights.

Furthermore, for example James (1999) pointed out that the firms are eager the hire their own descendants and family member to the company to retain control. But he recognized issues of favouring family members when hiring new employees, especially managers. The family members were chosen because of the family relation and not

[2] A simple example of a cross -or pyramid ownership is where both a holding company of the family and the family member own part of the company, thus having combined a larger stake of the company (Faccio & Lang 2002).

because of their skills. Other harming factors were for example conflicts between family members, instability and maintaining the harmony of the family, which lead to poor decision making, destroying the value of long-term investments and decline in firm performance. Both Fama and Jensen (1983) and James (1999) hypothesised that family firms should perform best when managed by outside managers with close monitoring from the family. Mishra, Randøy and Jenssen (2001) noted that families might be uneager to hire more capable professional management to run the business and the family businesses may interfere to the corporate decision making to gain personal benefits by determining the minority shareholder.

3.2. Risk Aversion Behaviour

Several studies of family owned companies show that the firms act in a more risk averse behaviour than non-family owned companies. This is seen for example in family owned firms' capital structure. For example research from McConaughy, Matthews and Fialko (2001) studied the debt financing of publicly traded founder family controlled firms, in the United States. The research period was from 1986 to 1988 and the authors were trying to find whether the founder family controlled firms perform better than non-founding family controlled firms and if founder family controlled firms debt financing was more risk averse.

They tested their hypothesis by comparing founder family controlled firms debt-to-total asset –and cash dividend payout ratios with non-founding family controlled firms and found that ownership structure has an effect on firm capital structure and firm efficiency. The results were that there appeared to be a difference between the two comparable company types. Founder family controlled firms seemed to prefer long-term debt to short-term debt.

McConaughy, Mishra, Walkerson and Mishra (1998) suggested that the founder family controlled firms are reluctant to use debt financing because they are risk averse to control risk. Compared to the non-controlled family firms, founder family controlled companies were less leveraged, because control risk becomes larger when companies are more leveraged and therefore more likely to go to bankrupt. McConaugy et al. (1998) sample was from listed US companies and they found that that founder family controlled firms use less debt financing and especially short-term debt. The behavior of avoiding short-term debt was explained by the more restricted covenants, refinancing

risk and the uncertainty to roll over short-term debt. McConaughy et al. (1998) also raised the concern that the reluctance to use debt finance may expose the firms to give up profitable investments projects and therefore lead to conflicts of interest between the family owners and the other shareholders.

Firm future growth is heavily relied on their ability to bring new innovations to the markets. In other words this means investments to research and development (R&D). Investments to R&D are highly risky but still an important part of the companies surviving in the future. Therefore it is important to investigate if the family owned companies are as risk averse on the investments to R&D as they are in the debt financing. Furthermore it is not efficient for the company to diversify risk away. It is more efficient for investors to diversify and reduce risk on their own but as families have most of their money invested to the family company this is naturally not possible and thus they diversify the risk inside the company. This only benefits the family and harms the other company shareholders and raises agency problems between them. (Villalonga & Amit 2006.)

3.3. Longer Investments Horizons

Literature from for example James (1999) suggested that time horizon for family owned companies is longer and therefore outperform other similar non-family owned companies from the same industry. Companies where the ownership and management is linked, the managers tend to strive for their own benefit and not the maximization of firm value. On the other hand firms where management and ownership is not linked the managers would strive for positive net present value investments but are still faced with the agency problems and costs of monitoring the management. James suggested that family owned companies differ from non-family owned companies by not having these problems.

According to James' (1999) paper the explaining factor for longer investment time horizons for family companies, is the welfare of their family. The welfare of the family is the motivation for the company to perform well now and in the future. In other words the families see the company as more than a company. It is a heritage for the future generations. This means that automatically the investment horizons are longer when the firms are planning the business future a long time horizon. Family companies choose investments with positive net present value and the focus is not on how fast the

investment pays the money back. Also the agency problem of exploiting the firm value is eliminated because of the emotional bond to the company. James (1999) also suggested that this effect tends to be stronger when the acting managers are founder family members and not hired managers. These suggestions were also consisted with findings from Andersson and Reeb (2003). Their findings were that, family owned companies were considered as long term investors who treated the company as more as a heritage to descendants and therefore choosing long-term profitable investments.

The views from James were also consistent with Fama and Jensen (1983) statement that family owned companies perform better than companies without linkage with ownership and management because the savings in agency problem costs and also because family owned companies performance are highly tied to the families personal wealth. Because of the linkage to personal wealth the motivation to ensure the good performance of the company is higher at family owned companies compared to other companies without linkage between ownership and management. However, later Fama and Jensen (1985) corrected that the family investment process is not as straightforward as suggested earlier.

To conclude, when family owned companies go public they do not want to lose the control of the company. The concentration of ownership and especially to a family is more common in the central European countries and Asian countries than in the US, but even in the US there are significant amount of companies with a control owning shareholder (Andres 2008). This means that the family has a substantial stake shares and the voting rights. This assures the family to still keep the company in their control by having family members on the top executive levels of the company and as board members. They tend to prefer investments on a longer horizon to keep the company profitable now and in the long future and family owned firms have a more conservative view on debt financing. All these features are linked to firm performance by agency problem and saving costs from monitoring the agent and from their bad decisions.

4. AGENCY THEORY

Agency theory is a theory that explains the relationship between firm principals (shareholders) and their representatives (agents) in the company. Agency theory explains the problems of this arrangement, where ownership and control are separated and gives insight how to solve these problems. Agency theory was first introduced to the academic literature by Ross' (1973) study The Economic Theory of Agency: Principal's Problem.

The main objective of companies is shareholder wealth maximization and this should also be the goal of managers (Brealey et al. 2011: 37). But wealth maximization has its problems. Usually it requires risk taking and this makes managers roles more volatile. Therefore management that does not act as owners of the company usually tries to maximize their own wealth. This brings us to the core of the problem that is introduced in the agency theory. Principals and agents have different views of the future of the company. The separation of ownership and control together with conflicts of interest and asymmetric information, is defined as the moral hazard problem by Ross (1973), Jensen and Meckling (1976), and Fama and Jensen (1983). Because the moral hazard problem has a negative effect on the company it is in the interest of the principal to manage the moral hazard problem. The actions made by the principal to manage the moral hazard problem leads to different kinds of agency costs. Figure 2 illustrates the principal agency theory and the moral hazard problem.

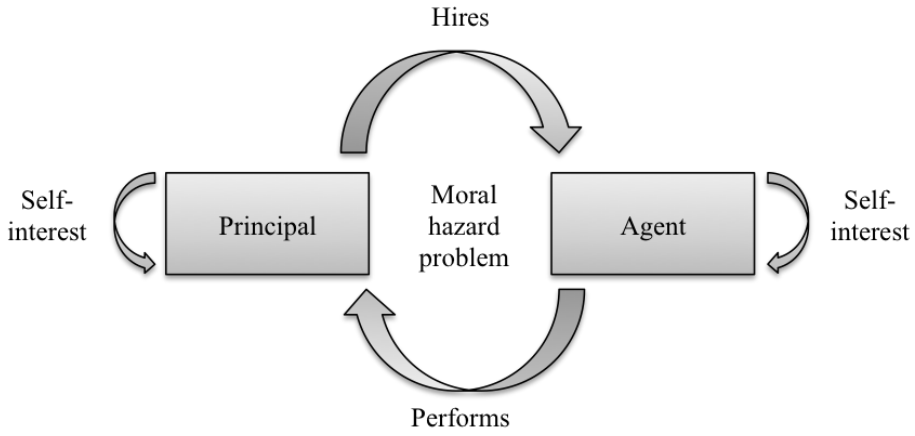

Figure 2: Principal agency theory.

Jensen and Meckling (1976) defined agency costs as a sum of monitoring expenditures by the principal, bonding expenditures by the agent and the residual loss. The monitoring expenditures appear when the principal monitors the agent's actions and makes efforts in controlling them by for example budget restrictions and operating rules. Bonding expenditures or bonding costs are costs from principal's efforts to pay or compensate the agent to ensure them not to act against principal's interest. The residual costs are the divergence in the welfare of the principle because of the actions of the agent after positive monitoring and bonding costs. In other words, even when monitoring and bonding costs are used in an agency relationship, agents still make some decisions that are not in the total favour of the principle. The total increases in costs that result from these actions are called the residual loss. Jensen and Meckling mention that it is nearly impossible to get rid of the residual losses, because principal's viewpoints and manager's decisions are never fully aligned. Jensen and Meckiling (1976) found in their research that the overall agency costs are positively correlated with the firm size. This means that the larger the company is the bigger the agency costs are. They concluded that the ownership and control should be combined to better align the interest of managers and owners and cutting down agency costs.

Fama and Jensen (1983) studied the effects of separating ownership and control in companies. They found that the affectivity of separating ownership and control depended on the size and complexity of the firm. In small corporations and organizations, where the decision management and control functions could efficiently be centralized to only a few agents, separation of ownership and control is ineffective. However, in more complex and bigger organizations the rising agency costs of separating ownership and control were seen as only marginal, compared to the more professional management obtained. Even though being effective to separate ownership and control in the latter firms, Fama and Jensen emphasized the importance of focusing on monitoring the managers, to keep the agency costs on a reasonable level. Also Shleifer and Vishny (1997) conclusions of large shareholders staying in the active management were consistent with the findings of Fama and Jensen (1983). Shleifer and Vishny (1997) suggested that incompetent large shareholder staying in management roles can be one of the greatest costs of the company and costing more than the potential agency costs.

Later Villalonga and Amit (2006) defined costs such as Schelifer and Vishny's (1997) theorized costs of incompetent management, to be a reason of agency problem II. In addition to the more traditional view of agency problems presented by Jensen and

Meckling (1976), Villalonga and Amit (2006) noted that other agency problems might arise when control and ownership are combined to a large shareholder (a family). They suggested that the large shareholder might take advantage of its controlling position to gain private benefits. The costs of monitoring and controlling, in other words the "traditional agency costs", diminish but the efforts from the large shareholders to gain private benefits might exceed the costs of the "traditional agency costs". These costs arise for example when families hire unqualified family members or the majority shareholders do other decisions that only benefits themselves. The traditional agency problem is from now on defined as agency problem I and the newer as agency problem II.

5. PREVIOUS LITTERATURE

Anderson and Reeb (2003) showed that approximately one third of S&P 500 companies can be classified as family owned companies and their research was on how these companies perform. Their research focus was to find answers to four questions: if firm value of family firms is higher than the value of non-family firms, if there is a difference in the performance of young and old family firms, if family firms perform better, is the firm performance effected on the level of firm ownership and if the family level of involvement or the CEO decisions have an effect on firm performance? Anderson and Reeb (2003) sample size was 403 different firms, data span being from 1992 through 1999, and the firms were categorized by standard industrial classification (SIC) codes to get a more accurate result from the ratios, ROA and Tobin's Q. Their study was the first big sample study from the US and their method has been utilized in the studies afterwards.

Anderson and Reeb (2003) found that on average family owned firms perform better than non-family owned firms. Family firms had a 6.65% higher ROA and 10% higher Tobin's Q than non-family firms. Closer observation of the factors that lead to these results show that when the founder acts as the CEO it leads to significantly higher Tobin's Q and ROA. Their findings show that descendant CEOs does not have a significant effect on firm performance and markets react to descendant CEOs the same way as for hired CEOs. The level of family ownership seemed to have a relation to firm performance. The firm efficiency is rising until the family owns approximately 30% of the firm outstanding equity. After this point the firm value declines from the effect of family ownership. However Anderson and Reeb (2003) point out the firms with family ownership over 30% of the outstanding equity still perform on average better than non-family firms. The age of the firm had similar results than the family ownership of total equity. "young firms" seemed to have stronger impact on the firm performance than "old firms" but "old" family owned firms still performed on average better than non-family owned companies. Anderson and Reeb (2003) defined family owned firms "young" if they were younger than 50-years. Over 50-year old companies were categorized to the "old firm" category.

Furthermore, Villalonga and Amit (2006) studied the effect of family ownership and especially the controlling and management effects on firm value. They constructed their study based on data from 508 firms listed on the Fortune 500 between 1994–2000. The

companies were also divided into categories by their industry, in the similar manner as in Anderson and Reeb (2003) study, and analysed with ratios Tobin's Q and return on assets. Villalonga and Amit (2006) found family ownership creates excessive value for all shareholders only if the founder acts as the CEO of the company or the chairman of the board with a hired CEO. However, inconsistent with Anderson and Reeb (2003), if descendant–CEO runs the firm the firm value to minority shareholders is less than the value of non-family owned companies. Furthermore, family owned firms created most value when control-enhancing mechanisms were absent, in other words family owners were treated like normal shareholders. Consistent with Villalonga and Amit (2006), Adams, Almeida and Ferreira (2009) study also showed that founder family control has a positive effect on firm performance. They had a similar dataset with studying Fortune 500 companies in 1992–1999, but modified the methods to take the possible endogenity better into account.

King and Santorini (2008) studied family firms and firm performance in Canada. According to the authors, Canada represents an area with similar regulatory environment as the US but more concentrated ownership in firms. They found that family ownership as an attribute did not lead to underperformance but using control enhancing methods had a negative effect on firm value. Family firms with single share policy showed superior performance measured by ROA and equivalent market performance measured with Tobin's Q as other firms. Family firms with active control enhancing policies, e.g. dual class of shares, had similar performance as other firms but underperform measured with Tobin's Q.

In addition, Pérez–Gonzáles (2006) used event study to find out what effect the choice of successor of the CEO has on firm performance. They studied 355 CEO-transitions between 1980 and 2000 in the US. Pérez and Gonzales found that the successor of founder-CEO has negative effect in the company ROA if they are related. They used event study to find if there are abnormal returns during the announcement day and studied also the long-term effect on firm performance. Pérez and Gonzales findings confirmed that in a substantial number of family companies, the successor CEO is a family member. They found that over the three year following period the companies experienced a significant negative 16% ROA. Further research showed that usually the descendant-CEO's are not qualified and are much younger in average than outsider CEOs. The negative effect on performance was highly correlated with the level of education of the descendant-CEO. Promoting an unqualified descendant-CEO, benefits

the family but not all the shareholders and thus raises the "other agency costs" presented by Villalonga and Amit (2006).

Moreover, Ang, Cole and Lin (2000) studied agency costs on firms with different kinds of ownership structures. They studied 1708 small non-listed companies in the US. They collected their data by utilizing the National Survey of Small Business Finances (NSSBF). They found that on average the small companies with one family controlling experience 3% lower agency costs, which lead to a better firm performance.

Table 1: Summary of findings in Northern America.

AUTHORS	DATA	RESULT
Anderson & Reeb (2003)	403 firms in S&P 500 between 1992–1999	On average family firms have 6.65% higher ROA and 10% higher Tobin's Q. Family ownership up to 30% has a strong positive effect on firm performance. Young family owned firms perform better than old. No difference between descendant–CEO and hired–CEO performance
Villalonga & Amit (2006)	508 Fortune 500 firms between 1994–2000	Family ownership creates excessive value to shareholders when founder acts as the CEO or as the chairman of the board. Negative effect when descendant act as CEO
Adams, Almeida and Ferreira (2009)	321 Fortune 500 firms between 1992–1999	Founder family control has significant positive effect on firm performance
Pérez–Gonzáles (2006)	355 CEO-transitions in public companies between 1980–2000	Substantial number of successors in Family owned firms are family members. Results on average to 16% lower ROA in the next 3 years. Descendant–CEOs are not enough educated to the job.
Ang, Cole and Lin (2000)	1708 non listed companies in the US. NSBBF survey	Small companies owned by a family experience on average 3% lower agency costs.
King and Santorini (2008)	613 Canadian firms between 1998–2005	Family firms with control enhancing methods underperform compared to other firms. If no control enhancing policies present, family firms outperform other firms.

Maury's (2006) empirical findings from family ownership on firm performance from Western European corporations were consistent with the findings from Anderson and Reeb (2003). Maury (2006) found that family owned companies in Western Europe have on average 7% higher Tobin's Q values and 16% higher return on assets than non-family owned companies. The sample was constructed from 1672 non-financial firms from 13 Western European countries[3]. Maury (2006) research hypothesis were similar to Anderson and Reeb's (2003). The study's purpose was to find if family owned firms perform better than non-family firms and what is the effect of active and passive family control on firm performance.

Maury (2006) findings were that active family ownership, in other words where at least two family members act as high ranked managers, has a positive effect on firm performance and passive family ownership does not. These findings are consistent with the suggestion of basic agency theory from Fama and Jensen (1983) that firm ownership diminishes the agency problem costs of monitoring management. In addition, when family equity shares was on moderate levels 10–40% had a positive effect on firm value measured by Tobin's Q and firm performance measured by ROA when being over 30%. Furthermore, Barontini and Caprio (2006) studied, with a similar data to Maury (2006), family ownership and performance in continental Europe and widened the research to what effect family control, at founder and descendant level, has on firm performance. Their data consisted from 675 large companies (having more than €300 million in assets) firms from 11 countries[4] from 1999 to 2001. They found consistent results with studies from the US with the founder acting as the CEO or non-executive director. Barontini and Caprio (2006) also found references that family involvement in the company management exists also at the descendant level, however these results were not statistically significant. Moreover they found that when families are not represented at the company board, the family owned companies perform worse than non-family controlled firms.

Furthermore, Sraer and Thesmar (2007) studied 1000 publicly listed companies in France between 1994 and 2000. Family firms accounted for two thirds in their data sample. They found that family controlled companies perform better than widely held, both when founder acts as the CEO and when there is a hired professional CEO. They

[3] Countries included in the sample: Austria, Belgium, Finland, France, Germany, Ireland, Italy, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom (Maury 2006).
[4] Countries included in the sample: Belgium, Denmark, Finland, France, Germany, Italy, the Netherlands, Norway, Spain, Sweden and Switzerland (Barrotini & Caprio 2006)

also found that the positive effect of firm performance is also significant when the descendant-CEO runs the company. These findings are consistent with the findings from Barontini and Caprio (2006).

Andres (2008) studied the difference companies with various kind of control owning shareholder blocks and their firm performance, trying to find out whether family blockholders outperform other controlling blockholders. The studied consisted of 275 listed companies in Germany between 1998–2004. Germany was chosen because the listed companies in Germany have at least one controlling shareholder in up to 85% of the listed companies. The controlling shareholders varied from state and institutionalized ownership to family ownership. In Andres' sample the family owned companies accounted for 37.5 % of the sample and on average they owned 63% of the voting rights, but only 48.7% of the cash flow rights, indicating the existence of dual class shares.

Andres (2008) research found that on average family controlled firms outperform both other controlling shareholder blocks as well as widely owned companies. The family controlled blockholders were also the only blockholders showing statistically significant positive results on firm performance. Family ownership resulted in a 3.1% to 4.5% higher ROA compared to other ownership structures. Further analysis also found that the family owned firms only performed better when the families were still actively involved in the company, acting either as an executive or having a board member in the board of directors and thus minimizing the agency costs. Furthermore the strongest positive performance of family ownership was when the founder of the company acted as the CEO. Without active involvement in the company, there could not be found a difference between family shareholder and any other shareholder of the company.

Isakov and Weisskopf (2014) extended Andres method of studying if the family ownership is special to the Swiss market. As in Germany and in Western-Europe in general, in Switzerland family ownership concentration is highly common. Isakov and Weisskopf studied Swiss stock exchange listed family firms from 2003 to 2011. Consistent with previous studies, in general family firms perform better than non-family firms. However, they found that family ownership has a negative effect on the market values of the firms. Isakov and Weisskopf showed that with a higher than 80% ownership stake family firms destroy the market value of the company. However, when the ownership stakes are on a more moderate level the companies start to show superior performance compared to other firms and thus higher market valuations.

However, inconsistent with the other studies from Europe, Bennedsen, Meisner Nielsen, Perez-Gonzalez and Wolfenzon (2007) found that descendant–CEOs and family ownership are significantly negatively correlated with firm performance in Danish non-public and public companies between 1994 and 2002. They found that it leads to 4% poorer firm performance on average. The effect was especially strong on fast growing industries and industries that required high skilled labour.

Previous studies relating to the family ownership and firm performance are very limited with Finnish data. In addition to Maury (2006) and Barrotini and Caprio (2006), the most comprehensive study from Finnish data is made by Tourunen (2009) together with Statistics Finland. Tourunen studied how many mid and large sized family firms there are in Finland, in which industries they operate and what is their economic impact to the Finnish economy. In addition, the research also covered the profitability of family firms and how family ownership and control affects the performance of the companies. The research found that, family firms are profitable and with and try to hold on to their employees, but not with a cost of poorer profitability of the company. The findings show that keeping their employees is as important to Finnish family firms as the profitability of the company. Furthermore, listed family firms seem to outperform other listed companies when measuring with ROI. Listed family firms have also higher equity ratio and lower net gearing ratio than other listed firms. Findings from family firm performance from Tourunen's research are consistent with other European studies, but worth noting is that Tourunen used only univariate testing when measuring differences between family firm and other firms performance. This method is quite naive and thus not considered as good method as other previous research from this area.

Both Maury (2006) and Andres (2008) noted that there was no significant relationship between family owned excessive control and firm performance. This indicates that in the Western European countries the shareholder protection laws are developed and thus the family owners as majority shareholders cannot act to their own benefit. When the majority shareholders cannot exploit the minority shareholders they seem to act as the protectors of the company and its future. This means that the conflict of interest and the agency costs between minority and majority shareholders diminish and thus also the negative effect on firm performance.

Also Claessens et al. (2000) study from East Asian Countries indicates the importance of shareholder protection laws with family owned companies and their performance.

They found that excessive control of the majority shareholder affects negatively the firm value. They suggested that the difference in results between Europe and East Asia is in the shareholder protection laws. Wealth in East Asia is highly concentrated to a handful of families. Due to the lack of shareholder protection laws and more underdeveloped corporate governance regulations the families are able to act to their private benefits, which in return affects negative on the total firm value. These findings are consistent with La Porta et al. (1999) theory of the better the shareholder protection laws, the better the valuation of the company. However, interestingly Villalonga and Amit (2006) findings from the US with negative correlation between family control enhancing mechanisms and firm performance from the US, which arguably have much more developed shareholder protection laws than Eastern Asian countries. Villalonga and Amit's (2006) results were consistent with Claessens et al. (2000), but unlike in Eastern Asia, further analysis showed that the other benefits that Family ownership creates more value to minority shareholders than in non-family firms in the US.

Moreover, Anderson and Reeb (2003) noted there is an endogenity problem with the study results. The study results do not take into account the fact that family owners might be exiting the poor performing firms early and thus the performance of family firms are better compared to non-family firms. The families have access to insider information and they have usually a good view of the industry. This together with the fact that most of the family's equity is invested in the company, it is rational for them to exit companies with bad future growth opportunities. But in the other hand if the company has great growth opportunities they will stay active in the company. Andres (2008) also addressed this issue but said that it is highly unlikely that the firm families cannot forecast the firm performance decades in the future. They also showed that in their data, the family ownership had been stable for the past 82–years. This indicated that the families stick with the companies also with bad economic times. Arguably this shows the emotional link that families have with their company. Also Adams et al. (2009) found, with their method that took the endogenity better into account, that founder–CEO's stuck with their companies both through good and bad times and were likely to sell the company in a good financial state.

Furthermore, Miller, Miller, Lester and Cannella (2007) noted that the results are sensitive to the definition of family ownership, thus explaining the differences in the study results from the same markets. Moreover Andres (2008) noted the differences in the definition of family ownership. The definitions of family ownership differ between studies. For example Sraer and Thesmar defined family ownership by having an

ownership stake bigger than 0%, whereas other studies have used significantly higher or multiple ownership stakes when defining family ownership (see for example Anders 2008, Anderson and Reeb 2003). Obviously this has a significant impact on the study results. When the ownership stake is defined at a lower stage, more companies are considered as family owned and makes the study results more challenging to compare.

Table 2: Summary of the findings from Europe.

AUTHORS	DATA	RESULT
Maury (2006)	1672 non-financial companies in Western Europe 2003	Family owned firms had on average 7% higher Tobin's Q and 16% higher ROA
Barontini & Caprio (2006)	675 large companies in continental Europe between 1999–2001	When founder acts as an executive or CEO firms perform better. If no family member represented on the company board firm performs worse.
Sraer & Thesmar (2007)	100 Publicly listed companies in France between 1994–2000	Family firms perform better than non-family firms, even when having hired CEO or descendant-CEO
Andres (2008)	275 publicly listed companies in Germany between 1998–2004	On average family controlled firms showed 3.1%–4.5% higher ROA, but only when family is actively involved in the company
Bennedsen, Meisner Nielsen, Perez-Gonzalez and Wolfenzon (2007)	Danish public and non public companies between 1994–2002	Family ownership leads to 4% poorer firm performance
Isakov & Weisskopf (2014)	185 Swiss stock listed companies between 2003–2010	In general family ownership leads to better firm performance. Family ownership over 80% starts to impact market valuations negatively.
Tourunen (2009)	Finnish Large and mid sized companies between 2000–2005	Listed family firms have better firm performance measured with ROI, higher equity ratio and lower net gearing compared to other firms.

Concluding the previous empirical evidence from the Western European countries and Northern America, the family ownership seems to be an effective form of ownership when the corporate governance regulations and the shareholder protection laws are on a developed level. This arguably is the case in developed countries such as Western European countries and the US. This conclusion is also consistent with La Porta, López-de-Silanes, Schleifer and Vishny (2002) findings from investor protection and company valuation. They found that the better the shareholder protection laws are, the better the valuation of the company is. Also Burkart, Panunzi and Schleifer (2003) theorized that if a country improves shareholder protection laws the valuation of the company should grow. They also stated that this would explain why efforts in creating better protection laws in developing countries face resistance. The current majority shareholders (families) would lose the possibility to gain private benefits from the company and the boost in firm valuation would benefit minority shareholders more. In agency theory's terms the agency problem II presented by Villalonga and Amit (2006) diminishes when the shareholder protection laws are on a developed level and the firms are able to save in these agency costs.

Moreover, the founder effect seems to be proven to exist both in Western European countries and the US. In other words it seems that when the founder acts actively in the company it has a positive effect in the company. This is explained because the deep knowledge in the industry and saving in the agency costs of monitoring the management. The conclusions about descendant management are not as straightforward as the founder. The descendants should only act in the company if they are competent to the position. This becomes more important, the more important position the descendant holds in the company. Especially when acting as the CEO, the descendant should be equally as good as or better than other professional CEOs, if the firm performance is emphasized. If the descendant is incompetent the agency costs between minority shareholders and the founder family grows, thus reducing the firm overall value. Deciding to heir the management of the firm to the descendant benefits the family but not the other shareholders. Both the founder effect and the descendant acting as the CEO are sensitive to the size of the firm. When the company grows and becomes more complex, grows also the likelihood for the family to need outside help to manage and fund the company. Figure 3 illustrates the conditions to better firm performance to family owned firms in Western Europe and the US.

These findings are proof of the traditional agency problem I diminishing in family owned companies. As the control and the ownership are centralized, the firm is able to

save on agency costs and therefore having a better firm performance. However because there are conditions on firm performance having a positive effect on firm performance, we can argue that the agency problem II presented by Villalonga and Amit (2006) has a crucial role in this research question. But with the conditions listed above, we can suggest that the "other agency costs" stay at a reasonable level, the traditional agency costs decrease and families firms are able to perform better than non-family owned firms.

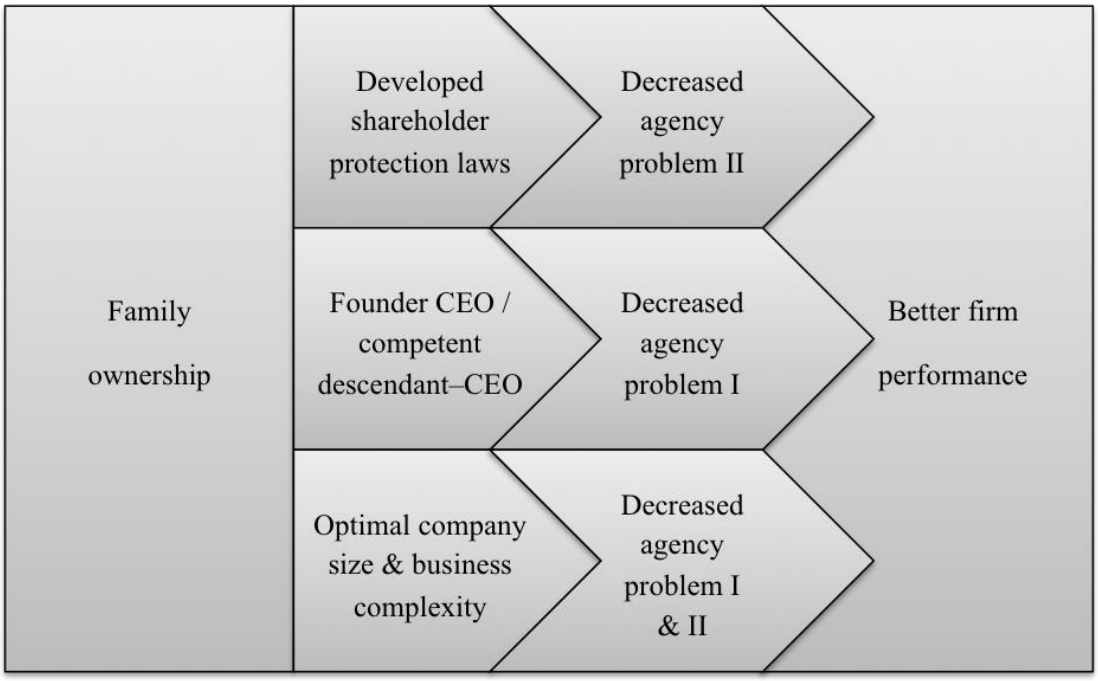

Figure 3: Conditions to better firm performance with family ownership in Western European and US companies.

6. DATA AND METHODOLOGY

6.1. Measures of Firm Performance

Financial measures and furthermore financial ratios are an important tool for both investors and financial managers. Financial ratios are used to measure the current and future performance of the firm. Financial managers use them to analyse their current projects and investors use ratios to help them with their investing decisions. Ratios are a good tool for investors to compare firms with each other. Financial ratios are usually derived from the firm's financial statements and other publicly available data. They are good estimates but give no guarantee about the future. (Brealey, Myers & Allen 2011: 704–720.)

In the next part two financial ratios are taken into closer observation. The ratios are Tobin's Q and return on assets. These two ratios are chosen based on that they are commonly used in academic literature and research regarding the topic of family ownership and its effect on firm performance. Therefore it is important to understand these two main ratios.

6.1.1. Tobin's Q

Tobin's Q is a ratio developed by James Tobin (1969). The Q is calculated by dividing firm total market value by replacement value of the firm's assets. Tobin's hypothesis was that the market value of the firm should reflect to the firm real asset value and if the values differ the firm is over –or undervalued depending on the ratio value.

(1) $$\text{Tobin's Q} = \frac{\text{Market Value of the Firm}}{\text{Total Assets}}$$

The numerator, market value of a firm, is calculated by multiplying the current stock price with the number of stocks. Of course this works only for publicly traded companies and calculating the market value of a privately owned companies is much more challenging. Total assets value is the current and fixed assets of a company and these can be found in the company's balance sheet.

Following Tobin's theory firm is considered as undervalued when Q gets a value between 0 and 1. This means that the repurchasing price of the existing assets exceeds the market value of the company. The firm is considered as overvalued when Q gets values over 1. High Tobin's Q can also be interpreted as investors' expectations to the company. If markets have high hopes to the company the Q value will be higher. This is because the ratio takes only into consideration only the accountable capital, therefore capital that cannot be measured (intangible assets) makes the ratio values curve upwards. Therefore companies with high growth expectations or high value knowledge of certain area have better Tobin's Q values. (Tobin 1969; Tobin & Brainard 1977.)

6.1.2. Return on Assets

The return on assets (later ROA) is a commonly used firm performance ratio. ROA is usually presented as a percentual number, which indicates the profitability of firm assets. ROA is calculated by dividing firm earnings before interest, taxes, depreciation and amortization (EBITDA), earnings before interest and taxes (EBIT) or net income by total assets. In other words ROA shows how much revenue the firm assets create. The basic formula for ROA is as follows.

$$\text{(2)} \qquad \text{ROA} = \frac{\text{EBITDA or EBIT or Net Income}}{\text{Total Assets}}$$

The numerator of ROA formula is EBITDA, EBIT or net income, or in other words the company's annual earnings. EBITDA, EBIT and net income can be found on the company's income statements in the given order net income being the last. In other words net income is company earnings after all deductions. EBITDA and EBIT are often used alongside net income when calculating financial ratios to diminish the differences in accounting procedures between companies (for example in depreciations and amortizations). The denominator, total assets, may sometimes also be presented as average total assets to get a more accurate view from the data. When using average total assets the asset value is an average between starting and ending values of assets from the firm and these numbers can be found, as with the Tobin's Q, from the firm balance sheets. Total assets include all firm assets, both current and fixed assets. (Brealey, Myers & Allen 2011: 704-720.)

Using ROA has some disadvantages. The ratio is only useful to compare firms from the same industry with each other. This is because of the denominator total assets. The asset values between industries may differ a lot. For example industries that require a lot of assets, such as automotive industry, have lower ROA than industries such as software or consulting where the main asset is intangible. Therefore good ROAs in one industry may not be as good when compared to another industry. In academic research ROAs are also usually only used to compare firms in the same industry. (Brealey, Myers & Allen 2011: 704–720.)

6.2. Data Description

The market and accounting data has been collected from years 2007–2013 using Worldscope & Orbis databases resulting 700 firm year observations. The firm specific ownership structures were hand collected from Orbis and company websites. The data collected is based on companies listed on the NASDAQ OMX Helsinki stock exchange in the start of the observation period year 2007. Financial companies and banks are excluded from the data due to difficulties of comparing Tobin's Q and ROA with other industries. Excluding financials is standard procedure in existing literature on the topic (see fore example Andres (2008) and Anderson and Reeb (2003)). Furthermore, companies that had been removed from the NASDAQ OMX Helsinki -stock exchange during the observation period were excluded from the data. Most common reasons for the exits were buyouts and bankruptcies. In total 45 companies were excluded from the data due to reason mentioned above resulting in end total of 100 observed companies. Moreover, the observed companies were categorized to Oil & Gas, Material, Industrials, Consumer Goods, Consumer Services, Health Care, Telecom, Utilities and Technology industries following NASDAQ's categorization.

By utilizing the Finnish Family association definition of listed family firms, a listed company is defined as a family firm if a person or their family owns or has acquired 25% of the voting rights of the company and is actively involved in the company. Other additional confirming methods of identifying family firms are used in situations where identifying the company with the main definition is challenging. These situations appear especially with old families (for example Ehrnrooth and Ahlström families) that have investments in many different listed companies. These alternative identifying methods are for example common citations to the company as a family firm, company defining

itself as a family firm and long term family commitment to the firm. For example in the case of Ehrnrooth and Ahlström families, with utilizing these additional identifying methods only a few of the companies controlled by these families can be identified as family firms. This definition of family firms results in a total of 26 family firms in NASDAQ OMX Helsinki during 2007–2013.

Table 3: Number of non-family firms and family firms by industry.

Industry description	Number of firms	Family firms	Non-family firms	Family firms %
Consumer goods	15	5	10	33%
Consumer services	9	1	8	11%
Health care	6	1	5	17%
Industrial	40	13	27	33%
Materials	8	1	7	13%
Oil&Gas	1	0	1	0%
Technology	18	5	13	28%
Telecommunications	2	0	2	0%
Utilities	1	0	1	0%
Total	100	26	74	

Table 3 shows the number of total firms and family firms in different industries. The biggest industries in the dataset are industrial, technology and consumer goods. Industrial companies represent 40% of the total dataset, technology 18% and consumer goods 15%. Also family firms have strong presence in these industries. Family firms represent 33% of all industrial and consumer goods companies and 28% of technology companies. In total 23 of the 26 (88%) family firms are categorized under these three industries. Family-firms are not present in oil & gas, telecommunications and Utilities industries in the dataset. Appendix 1 lists all the firms in the data sample, industries and identifies the firms that are categorized as family owned.

Table 4 shows the summary statistics of all of the firms. Summary statistics are shown as time series averages per firm, in other words each variable has been averaged across time for each firm giving only one observation per firm. Panel A shows the summary statistics for the whole data sample with all firms, panel B shows the summary statistics for family firms and lastly panel C shows the summary statistics for the non-family firms.

Table 4: Summary statistics of all firms.

	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis
Age	76.28	67.50	366.00	8.00	52.27	1.87	10.62
EBIT (€ 1000)	127510	11448	3036516	-138429	419803	5.24	31.88
EBITDA (€ 1000)	210635	24577	4447438	-12455	622042	5.13	30.96
Employees	2757	2460	10629	47	2344	0.95	3.49
LT Debt / Total Assets	0.27	0.27	0.78	0.00	0.15	0.68	4.04
LN Total Assets	12.56	12.19	17.31	8.40	2.00	0.33	2.31
Net Income (€ 1000)	79531	6916	1985690	-235571	288328	5.01	29.20
Turnover (€ 1000)	1763725	267901	38106000	5839	4502780	5.82	44.45
R&D Costs / Sales	0.36	0.02	4.57	0.00	1.06	3.25	11.98
ROA (EBIT)	0.05	0.05	0.32	-0.27	0.09	-0.75	5.33
ROA (EBITDA)	0.09	0.09	0.36	-0.26	0.09	-0.62	5.61
ROA (Net Income)	0.02	0.03	0.23	-0.44	0.09	-2.18	11.48
Tobin's Q	0.92	0.74	3.02	0.16	0.68	1.37	4.22

Panel B: Family firms

	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis
Age	88.31	74.50	366.00	10.00	72.52	2.15	9.24
EBIT (€ 1000)	50793	7476	674243	-4986	135543	3.99	18.67
EBITDA (€ 1000)	75454	10917	742700	-2960	165381	3.08	12.02
Employees	3640	608	43298	23.00	7642	3.41	12.17
LT Debt / Total Assets	0.27	0.29	0.65	0.00	0.15	0.02	3.34
LN Total Assets	11.84	11.21	15.16	8.40	1.81	0.36	2.26
Net Income (€ 1000)	33975	1529	506414	-6600	101391	4.13	19.64
Turnover (€ 1000)	699572	107759	5263800	5839	1263334	2.33	7.96
R&D Costs / Sales	8684	1453	72443	0	17425	2.49	8.56
ROA (EBIT)	0.05	0.04	0.21	-0.16	0.07	-0.47	4.48
ROA (EBITDA)	0.10	0.08	0.26	-0.12	0.07	-0.51	4.67
ROA (Net Income)	0.02	0.02	0.15	-0.18	0.06	-0.73	5.21
Tobin's Q	0.93	0.49	2.93	0.16	0.79	1.17	3.22

Panel C: Non-family firms

	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis
Age	72.05	66.00	181.00	8.00	42.82	0.53	2.39
EBIT (€ 1000)	154464	17438	3036516	-138429	479457	4.59	24.42
EBITDA (€ 1000)	258131	40564	4447438	-12455	711749	4.45	23.35
Employees	6904	1903	132427	23	14684	5.79	41.94
LT Debt / Total Assets	0.28	0.27	0.78	0.06	0.15	0.89	4.21
LN Total Assets	12.81	12.53	17.31	8.78	2.01	0.28	2.24
Net Income (€ 1000)	95537	8611	1985690	-235571	328973	4.40	22.53
Turnover (€ 1000)	2137617	365628	38106000	7668	5138546	5.11	34.14
R&D Costs / Sales	76840	2583	4695429	0	544801	8.40	71.73
ROA (EBIT)	0.04	0.05	0.32	-0.27	0.09	-0.75	5.15
ROA (EBITDA)	0.09	0.09	0.36	-0.26	0.09	-0.62	5.49
ROA (Net Income)	0.01	0.04	0.23	-0.44	0.10	-2.20	10.72
Tobin's Q	0.91	0.75	3.02	0.18	0.64	1.46	4.73

6.3. Methodology Description

Following the method by Andres (2008) the following panel data regression model is applied to the data:

(3) Firm Performance = $\beta_0 + \beta_1$(family firm) + β_2(control variables) + β_3(industry dummies) + β_4(year dummies) + e_{it}

,where *Firm performance* represents both ROA (EBITDA, EBIT & Net income) and Tobin's Q. *Family firm* is a binary variable that takes value of 1, when observing an family company. *Control variables* used are natural logarithms of the firm age and total assets, ratio of long term debt divided by total assets, revenue, R&D costs divided by sales and the amount of employees. *Industry dummies* are constructed based on the NASDAQ company industry classification and lastly, the *year dummies* will take a value 1 for each year. Heteroscedasticity is corrected by using White corss-section robust coefficient covariance estimator.

As the ownership structures of the observed companies stay stationary, fixed effects model cannot be used to the data. This is because one of the underlying requirements of the fixed effects model is longitudinal variation in the data. Therefore, the main method used to test is random effects generalized least squares (GLS) regressions. Pooled ordinary least squares (OLS) regressions are used as an alternative method and a robustness test to the model. Both of these tests are commonly used in the previous research (see for example Isakov and Weiskopf (2014), Andres (2008) and Anderson & Reeb (2003).

7. EMPIRICAL RESULTS

7.1. Univariate Testing

Table 5 shows the results of difference in means tests between family firms and non-family firms. Test is calculated first by averaging variables across time per company and then calculating the mean across the firms. Unlike previous research (see for example Anderson & Reeb 2003, Andres 2008, Isakov & Weisskopf 2014), difference in means testing shows only statistical significant difference between total assets in family firms and non-family firms. Family firms in Finland tend to have lower average total assets compared to non-family firms. Further, the univariate test also suggests that family firms tend to be on average smaller when comparing revenues but seem to invest more into R&D than non-family firms. Moreover, family firms seem to be older than non-family firms. However, these findings from the company age, revenue and R&D/sales ratio are not statistically significant findings. Lastly, all the accounting measures (ROA EBIT, EBITDA and net income) seems to average slightly higher than non-family firms. Same effect is seen in the market ratio Tobin's Q. These findings support the hypotheses of the thesis, but are not statistically significant.

Table 5: Difference in means tests.

Variable	Family firms	Non-family firms	T-statistic	P-value
LT debt / Total assets	0.2703	0.2764	0.18	0.8611
Ln(Total Assets)	11.8414	12.8075	2.16	0.0335**
Number of Employees	2419	2876	0.85	0.3952
R&D / Total Assets	0.63	0.27	-1.50	0.136
Revenue (€ 1000)	699572	2137617	1.41	0.1624
Firm Age (Years)	88.31	72.05	-1.37	0.1738
Tobin's Q	0.9288	0.9127	-0.10	0.9181
EBIT (€ 1000)	50793	154464	1.08	0.2809
EBITDA (€ 1000)	75454	258131	1.29	0.1992
Net Income (€ 1000)	33975	95537	0.94	0.3516
ROA Net Income	0.0249	0.0146	-0.50	0.6163
ROA EBITDA	0.0967	0.0943	-0.12	0.9026
ROA EBIT	0.0516	0.0432	-0.42	0.6783

Table 6 shows a correlation matrix between the variables of the analysis. The correlation coefficients between variables are shown on the top row and t-statistics on the bottom row on each row. Similarly as the difference in means test, also the correlation matrix is constructed from one observation per firm time-series averages. Founding family ownership seems to have a positive, but weak, association between market and accounting measures (Tobin's Q and ROA) used in the analysis. Consistent with the univariate analysis, family ownership is associated with a negative effect on total assets and positive in firm age, R&D/sales ratio. To understand family ownership effect in more depth a multivariate analysis is conducted.

Table 6: Correlation matrix.

	Age	EBIT	EBITDA	Emplo-yees	Lever-age	Family Firm	LN Total Assets	Net Income	Turnover	R&D Costs / Total Assets	ROA (EBIT)	ROA (EBITDA)	ROA (Net Income)	Tobin's Q
Age	1.00													

EBIT	0.18	1.00												
	1.83	-----												
EBITDA	0.21	0.98	1.00											
	2.11	50.79	-----											
Employees	0.06	0.03	0.03	1.00										
	0.56	0.33	0.25	-----										
Leverage	0.06	-0.08	-0.05	0.04	1.00									
	0.64	-0.77	-0.54	0.43	-----									
Family Firm	0.14	-0.11	-0.13	-0.09	-0.02	1.00								
	1.37	-1.08	-1.29	-0.85	-0.18	-----								
LN Total Assets	0.44	0.53	0.58	-0.02	0.00	-0.21	1.00							
	4.87	6.21	7.11	-0.17	0.01	-2.16	-----							
Net Income	0.18	0.99	0.96	0.04	-0.10	-0.09	0.50	1.00						
	1.79	95.07	35.53	0.39	-0.96	-0.94	5.64	-----						
Turnover	0.24	0.66	0.75	-0.07	-0.08	-0.14	0.61	0.65	1.00					
	2.43	8.78	11.18	-0.65	-0.84	-1.41	7.63	8.42	-----					
R&D Costs / Total Assets	-0.04	-0.07	-0.04	-0.11	0.18	0.15	-0.10	-0.08	-0.01	1.00				
	-0.38	-0.71	-0.41	-1.07	1.84	1.50	-1.04	-0.77	-0.09	-----				
ROA (EBIT)	0.32	0.19	0.15	-0.15	-0.44	0.04	0.29	0.20	0.07	-0.17	1.00			
	3.37	1.89	1.53	-1.45	-4.85	0.42	2.95	2.04	0.74	-1.73	-----			
ROA (EBITDA)	0.30	0.16	0.13	-0.11	-0.43	0.01	0.24	0.17	0.04	-0.22	0.96	1.00		
	3.06	1.60	1.33	-1.06	-4.72	0.12	2.43	1.72	0.42	-2.27	35.76	-----		
ROA (Net Income)	0.30	0.17	0.15	-0.13	-0.49	0.05	0.28	0.19	0.09	-0.09	0.95	0.91	1.00	
	3.13	1.75	1.48	-1.26	-5.61	0.50	2.93	1.89	0.92	-0.87	29.72	21.92	-----	
Tobin's Q	-0.11	0.03	-0.01	-0.10	-0.30	0.01	-0.23	0.06	-0.08	0.13	0.30	0.30	0.22	1.00
	-1.14	0.33	-0.10	-1.02	-3.07	0.10	-2.30	0.60	-0.82	1.27	3.14	3.06	2.24	-----

7.2. Multivariate Testing

Table 7 shows the results when observing family ownership in general. In other words all family firms are compared versus non-family firms. Panel A shows the results with using random effects GLS method and panel B shows results with the alternative pooled OLS method for robustness test. In columns 1 to 3 the accounting measure ratio ROA is used in the regressions as the performance ratio and in column 4 the market performance ratio, Tobin's Q is used.

The results show that family firms do perform better than non-family firms when measuring with accounting performance measures. The coefficients of the family dummy for the random effects model is 0.0163 (significant at the 10% level) and with Pooled OLS method 0.0121 and 0.0091 (significant at respectively 5% and 10% significance levels). However, when measuring firm performance with the Tobin's Q no difference can be identified between the performance of family firms and non-family firms.

Table 7: Firm performance and family ownership.

Panel A: Random Effects GLS Method

	ROA (EBITDA)	ROA (EBIT)	ROA (Net Income)	Tobin's Q
	(1)	(2)	(3)	(4)
Intercept	-0.1903 (-2.65)***	-0.3005 (-3.46)***	-0.2808 (-2.01)**	3.0936 (3.31)***
Family Firm	0.0034 (0.33)	0.0136 (1.15)	0.0163 (1.68)*	-0.0615 (-0.76)
LN Age	0.0359 (6.79)***	0.0321 (14.46)***	0.0265 (1.71)*	0.0496 (0.49)
LN Total Assets	0.0160 (2.84)***	0.0224 (3.92)***	0.0254 (3.21)***	-0.1572 (-2.83)***
LT Debt / Total Assets	-0.3211 (-14.84)***	-0.3346 (-14.62)***	-0.5316 (-5.04)***	0.0084 (0.01)
Revenue	0.0000 (3.19)***	0.0000 (2.61)**	-0.0000 (3.64)***	0.0000 (0.83)
R&D Costs / Sales	-0.2220 (-7.82)***	-0.0217 (-6.99)***	-0.0179 (-2.97)***	-0.0111 (-0.60)
Employees	0.0000 (-5.91)***	0.0000 (-5.39)***	0.0000 (-5.28)***	0.0000 (0.20)
Adjusted R-square	0.2745	0.3008	0.4209	0.1303

Panel B: Pooled OLS Method

	ROA (EBITDA)	ROA (EBIT)	ROA (Net Income)	Tobin's Q
	(1)	(2)	(3)	(4)
Intercept	-0.1242 (-3.35)***	-0.2112 (-4.45)***	-0.1990 (-2.76)***	2.6952 (7.59)***
Family Firm	-0.0003 (-0.08)	0.0091 (1.66)*	0.0121 (2.15)**	-0.0298 (-1.36)
LN Age	0.0399 (16.97)***	0.0371 (28.05)***	0.031 (4.14)***	0.0023 (0.06)
LN Total Assets	0.0109 (3.78)***	0.0155 (4.69)***	0.0169 (3.83)***	-0.0957 (-4.73)***
LT Debt / Total Assets	-0.2897 (-28.54)***	-0.2995 (-32.71)***	-0.4137 (-5.27)***	-0.7106 (-1.27)
Revenue	0.0000 (0.28)	0.0000 (0.25)	0.0000 (0.95)	0.0000 (-1.60)
R&D Costs / Sales	-0.0273 (-4.71)***	-0.0243 (-5.11)***	-0.0241 (-2.49)**	0.1007 (1.22)
Employees	-0.0000 (-2.83)***	-0.0000 (-2.88)***	-0.0000 (-3.86)***	0.0000 (2.83)***
Adjusted R-square	0.3486	0.3696	0.4173	0.1546

T-values are presented in paranteses. Asterix denotes statistical significance at the 1%(***), 5%(**) and 10%(*)-level.

Following Anderson & Reeb (2003) example, table 8 represent results of further investigation if family firm age has an effect on the performance. Family firms are divided into two dummies representing old and young family firms. The used cut-off point between young and old family firms is 50-years as in Anderson & Reeb's study resulting in 16 old family firms and 10 young family firms.

Tobin's Q regression coefficients of -0.1790 with the random effects method and -0.1477 with pooled OLS method show that old family firms tend to perform worse than other firms (at respectively 10% and 1% significance levels). Moreover, results show signs that young family firms would outperform other firms when measuring with ROA (EBIT & Net Income), as the random effects method show results close to 10% confidence levels and results with the pooled OLS method show strong statistical significance at 1% level

Table 8: Young and old family firm performance.

Panel A: Random Effects GLS Method

	ROA (EBITDA)	ROA (EBIT)	ROA (Net Income)	Tobin's Q
	(1)	(2)	(3)	(4)
Intercept	-0.1932 (-2.66)***	-0.3088 (-3.44)***	-0.2855 (-2.01)**	2.9980 (3.48)***
Old Family Firm	-0.0002 (-0.02)	-0.0015 (-0.11)	0.0087 (0.75)	-0.1790 (-1.70)*
Young Family Firm	0.0082 (0.47)	0.0332 (1.55)	0.0262 (1.61)	0.0940 (0.56)
LN Age	0.0373 (6.69)***	0.0378 (7.09)***	0.0293 (1.63)	0.0930 (0.82)
LN Total Assets	0.0158 (2.88)***	0.0214 (4.11)***	0.0249 (3.23)***	-0.0163 (-2.78)***
LT Debt / Total Assets	-0.3212 (-14.79)***	-0.3345 (-14.71)***	-05317 (-5.04)***	0.0070 (0.01)
Revenue	0.0000 (-5.86)***	0.0000 (2.25)**	0.000 (3.23)***	0.0000 (-0.56)
R&D Costs / Sales	0.0221 (-7.74)***	-0.0216 (-6.84)***	-0.0178 (-2.93)***	-0.0100 (-0.56)
Employees	0.0000 (-5.86)***	0.0000 (-5.07)***	0.000 (-5.24)***	0.0000 (0.26)
Adjusted R-square	0.2732	0.3013	0.4203	0.1301

Panel B: Pooled OLS Method

	ROA (EBITDA)	ROA (EBIT)	ROA (Net Income)	Tobin's Q
	(1)	(2)	(3)	(4)
Intercept	-0.1264 (-3.42)***	-0.2174 (-4.56)***	-0.2029 (-2.80)***	2.6570 (7.66)***
Old Family Firm	-0.0072 (-1.17)	-0.0100 (-1.45)	0.0002 (0.03)	-0.1477 (-5.61)***
Young Family Firm	0.0085 (1.16)	0.0338 (3.53)***	0.0274 (3.25)***	0.1221 (2.44)**
LN Age	0.0424 (17.95)***	0.0443 (17.76)***	0.0354 (4.16)***	0.0465 (1.24)
LN Total Assets	0.0103 (3.71)***	0.0139 (4.59)***	0.0160 (3.72)***	-0.1047 (-4.73)***
LT Debt / Total Assets	-0.2897 (-28.88)***	-0.2994 (-33.67)***	-0.4136 (-5.27)***	-0.7096 (-1.27)
Revenue	0.0000 (0.13)	-0.0000 (-0.16)	0.0000 (0.58)	-0.0000 (-1.83)*
R&D Costs / Sales	-0.0270 (-4.69)***	-0.0236 (-5.14)***	-0.0237 (-2.47)**	0.1051 (1.25)
Employees	-0.0000 (-2.47)**	-0.0000 (-2.06)**	-0.0000 (-3.29)***	0.0000 (3.16)***
Adjusted R-square	0.3484	0.3743	0.4182	0.1579

T-values are presented in paranteses. Asterix denotes statistical significance at the 1%(***), 5%(**) and 10%(*)-level.

In table 9 family companies are categorised with their market capitalization rate. Large and mid cap companies are pooled together due to the limited number of large cap companies in NASDAQ OMX Helsinki. The firms are divided into the groups utilizing NASDAQ's OMX Helsinki's official definition of less than 150 million euro market cap being small cap companies resulting in 11 large and medium cap and 15 small cap companies

The ROA (Net Income) results show with 0.0335 with random effects method and 0.0143 pooled OLS method (at respectively 1% and 5% significance levels) that small cap family firms do perform better than non-family firms. Also large and mid cap family firms show signs of better ROA, however not statistically significant when regressing with random effects method. When measuring with the market performance ratio Tobin's Q large & mid cap family firms continue showing strong performance with high confidence level but small caps do the contrary with strong negative results.

Table 9: Large and mid cap & low cap family firm performance.

Panel A: Random Effects GLS Method

	ROA (EBITDA)	ROA (EBIT)	ROA (Net Income)	Tobin's Q
	(1)	(2)	(3)	(4)
Intercept	-0.1820 (-2.26)**	-0.3009 (-3.13)***	-0.3135 (-2.17)**	3.8173 (4.03)***
Large & Mid Cap Family Firms	0.0083 (1.09)	0.0135 (1.47)	-0.0019 (-0.16)	0.4437 (4.79)***
Small Cap Family Firms	-0.0012 (-0.06)	0.0137 (0.70)	0.0335 (2.65)***	-0.5240 (-2.43)**
LN Age	0.0367 (6.30)***	0.0321 (9.17)***	0.0235 (1.49)	0.1194 (1.18)
LN Total Assets	0.0152 (2.42)**	0.0224 (3.38)***	0.0282 (3.27)***	-0.2198 (-3.44)***
LT Debt / Total Assets	-0.3208 (-14.94)***	-0.3347 (-14.47)***	-0.5335 (-5.09)***	0.0184 (0.02)
Revenue	0.0000 (3.38)***	0.0000 (2.66)***	0.0000 (3.51)***	0.0000 (0.89)
R&D Costs / Sales	-0.0221 (-7.71)***	-0.0218 (-6.89)***	-0.0180 (-2.98)***	-0.0074 (-0.39)
Employees	0.0000 (-5.79)***	0.0000 (-5.33)***	0.0000 (-5.25)***	0.0000 (0.25)
Adjusted R-square	0.2735	0.2997	0.4213	0.1456

Panel B: Pooled OLS Method

	ROA (EBITDA)	ROA (EBIT)	ROA (Net Income)	Tobin's Q
	(1)	(2)	(3)	(4)
Intercept	-0.1003 (-2.31)**	-0.1927 (-3.53)***	-0.2035 (-2.67)***	3.4220 (10.04)***
Large & Mid Cap Family Firms	0.0119 (3.57)***	0.0186 (4.47)***	0.0098 (1.60)	0.3428 (9.03)***
Small Cap Family Firms	-0.0120 (-1.35)	0.0000 (0.00)	0.0143 (1.73)**	-0.3859 (-6.09)***
LN Age	0.0420 (15.62)***	0.0387 (18.86)***	0.0306 (4.02)***	0.0652 (1.89)*
LN Total Assets	0.0088 (2.68)***	0.0137 (3.53)***	0.0173 (3.48)***	-0.1600 (-7.34)***
LT Debt / Total Assets	-0.2869 (-30.67)***	-0.2973 (-33.61)***	-0.4143 (-5.24)***	-0.6232 (-1.14)
Revenue	0.0000 (0.46)	0.0000 (0.39)	0.0000 (0.93)	-0.0000 (-1.24)
R&D Costs / Sales	-0.0273 (-4.65)***	-0.0243 (-5.05)***	-0.0241 (-2.50)**	0.0979 (1.24)
Employees	-0.0000 (-2.91)***	-0.0000 (-2.95)***	-0.0000 (-3.89)***	0.0000 (2.80)***
Adjusted R-square	0.3496	0.3698	0.4165	0.1905

T-values are presented in paranteses. Asterix denotes statistical significance at the 1%(***), 5%(**) and 10%(*)-level.

Previous research has confirmed a so called "founder effect" (see for example Anderson & Reeb (2003)), in which if the founder acts as the CEO of the company this leads to even better firm performance. Table 10 shows results of testing the founder effect within the thesis data sample. Due to the small sample size, family companies are divided into groups where the founder is still active in the company and where a descendant is active in the company. In other words the definition is not limited to acting as the CEO. With this grouping definition all 26 observed family firms can be divided either of the groups. Also due to the small sample size of the results might not be robust and should be interpreted as indicative results.

The results show no evidence of founder effect. However, family firms where descendants are active show strong evidence of outperforming other companies in OMX Helsinki when measured with ROA (EBITDA, EBIT and net income). Results show strong statistical significance with both regression methods.

Table 10: Founder and descendant run family firm performance.

Panel A: Random Effects GLS Method

	ROA (EBITDA)	ROA (EBIT)	ROA (Net Income)	Tobin's Q
	(1)	(2)	(3)	(4)
Intercept	-0.1778 (-2.43)**	-0.2949 (-3.27)***	-0.2759 (-1.96)*	3.1011 (3.40)***
Founder Active	-0.0217 (-0.86)	0.0009 (0.03)	0.0047 (0.22)	-0.0643 (-0.34)
Descendant Active	0.0166 (1.71)*	0.0203 (2.06)**	0.0224 (3.02)***	-0.0606 (-1.24)
LN Age	0.0355 (6.70)***	0.0319 (14.09)***	0.0262 (1.68)*	0.0501 (0.50)
LN Total Assets	0.0153 (2.66)***	0.0221 (3.70)***	0.0252 (3.17)***	-0.1578 (-2.84)***
LT Debt / Total Assets	-0.3219 (-15.02)***	-0.3352 (-14.79)***	-0.5326 (-5.04)***	0.0102 (0.01)
Revenue	0.0000 (3.30)***	0.0000 (2.61)***	0.0000 (3.63)***	0.0000 (0.83)
R&D Costs / Sales	-0.0222 (-7.92)***	-0.0218 (-7.05)***	-0.0180 (-2.98)***	-0.0111 (-0.60)
Employees	-0.0000 (-6.21)***	-0.0000 (-5.48)***	-0.0000 (-5.22)***	0.0000 (0.19)
Adjusted R-square	0.2751	0.3000	0.4204	0.1291

Panel B: Pooled OLS Method

	ROA (EBITDA)	ROA (EBIT)	ROA (Net Income)	Tobin's Q
	(1)	(2)	(3)	(4)
Intercept	-0.1124 (-2.96)***	-0.2049 (-4.19)***	-0.1935 (-2.64)***	2.6762 (7.73)***
Founder Active	-0.0264 (-2.41)**	-0.0048 (-0.37)	-0.0002 (-0.02)	0.0122 (0.23)
Descendant Active	0.0133 (3.14)***	0.0164 (3.62)***	0.0185 (4.56)***	-0.0518 (-3.64)***
LN Age	0.0395 (17.08)***	0.0369 (28.95)***	0.0308 (4.11)***	0.0029 (0.08)
LN Total Assets	0.0103 (3.48)***	0.0151 (4.44)***	0.0167 (3.73)***	-0.0947 (-4.74)***
LT Debt / Total Assets	-0.2917 (-28.84)***	-0.3005 (-33.26)***	-0.4146 (-5.23)***	-0.7075 (-1.27)
Revenue	0.0000 (0.55)	0.0000 (0.39)	0.0000 (1.06)	-0.0000 (-1.63)
R&D Costs / Sales	-0.0275 (-4.74)***	-0.0244 (-5.15)***	-0.0242 (-2.50)**	0.1011 (1.22)
Employees	-0.0000 (-3.22)***	-0.0000 (-3.03)***	-0.0000 (-3.84)***	0.0000 (2.82)***
Adjusted R-square	0.3530	0.3701	0.4173	0.1536

T-values are presented in paranteses. Asterix denotes statistical significance at the 1%(***), 5%(**) and 10%(*)-level.

Consistent with previous studies from Finland and the consensus in developed western countries, the results show both that family firms do outperform other companies and that young family firms are better performers than old family firms when measuring accounting performance. However, partly inconsistent with previous studies, findings do not support better performance when measuring with Tobin's Q. In addition, the results show that small cap family firms tend to perform better than large and medium cap family firms when measured with ROA. Further, the results show that both family firm categories outperform other firms. Inconsistent with previous studies, the results show no evidence of founder effect in the data sample. However, as there are only a very limited amount of observations, these results can be interpreted only as indicative. These results allow us to accept hypotheses H_1, H_2 and H_3 and decline hypothesis H_4.

Previous tests show that family ownership is positively associated with firm performance when compared to all other companies in the NASDAQ OMX Helsinki without specifying other major ownership structures. Table 11 shows results if family ownership is special compared to other identified common ownership structures.

In addition to family ownership, three other major common ownership structures are identified in NASDAQ OMX Helsinki. These are government blockholders, financial blockholders and strategic blockholders. Consistent with family firm definition, for a firm to be categorized to one of the other ownership structures the owner has to own at least 25% votes of the company and be a controlling shareholder. Government ownership represents any governmental ownership to the company. Financial blockholders represent majority ownership by private equity or other investing companies and strategic blockholders represent majority ownership by another company.

The results show no evidence of family firms being superior in terms of performance compared to other companies with identified ownership blocks. Furthermore, government owned listed companies show statistical significant underperformance when measuring with ROA. Moreover, when measuring with Tobin's Q companies with financial blockholder owners show better performance than other companies. Findings considering family firms are inconsistent with Andres' (2008) findings from Germany and Isakov and Weisskopf's (2014) findings from Switzerland. However, findings from the governmental blockholder are in line with the German results when measuring with ROA. These results lead to declining of H_5.

Table 11: Family ownership versus other ownership structures.

Panel A: Random Effects GLS Method

	ROA (EBITDA)	ROA (EBIT)	ROA (Net Income)	Tobin's Q
	(1)	(2)	(3)	(4)
Intercept	-0.1777 (-2.05)**	-0.2871 (-2.90)***	-0.2524 (-1.83)*	2.9361 (3.51)***
Family Firm	-0.0020 (-0.13)	0.0078 (0.49)	0.0047 (0.35)	0.0016 (0.02)
Goverment Blockholder	-0.0200 (-1.65)*	-0.0184 (-1.92)*	-0.0265 (-2.24)**	0.1905 (1.55)
Financial Blockholder	-0.0067 (-0.27)	-0.0120 (-0.57)	-0.0264 (-1.12)	0.1963 (1.67)*
Strategic Blockholder	-0.0119 (-0.48)	-0.0066 (-0.33)	-0.0131 (-0.91)	-0.0365 (-0.24)
LN Age	0.0355 (7.06)***	0.0319 (22.27)***	0.0260 (1.64)	0.0448 (0.42)
LN Total Assets	0.0166 (2.65)***	0.0228 (3.76)***	0.0256 (3.27)***	-0.1588 (-2.92)***
LT Debt / Total Assets	-0.3218 (-14.16)***	-0.3365 (-14.60)***	-0.5370 (-4.95)***	0.0337 (0.04)
Revenue	0.0000 (3.14)***	0.0000 (2.57)**	0.0000 (3.28)***	0.0000 (0.88)
R&D Costs / Sales	-0.0222 (-7.86)***	-0.0218 (-7.01)***	-0.0181 (-2.99)***	-0.0107 (-0.58)
Employees	-0.0000 (-5.91)***	-0.0000 (-5.36)***	-0.0000 (-5.33)***	0.0000 (0.11)
Adjusted R-square	0.2711	0.2975	0.4201	0.1285

Panel B: Pooled OLS Method

	ROA (EBITDA)	ROA (EBIT)	ROA (Net Income)	Tobin's Q
	(1)	(2)	(3)	(4)
Intercept	-0.1092 (-2.49)**	-0.1935 (-3.68)***	-0.1750 (-2.43)**	2.5565 (7.42)***
Family Firm	-0.0059 (-0.88)	0.0032 (0.43)	0.0031 (0.38)	0.0148 (0.63)
Goverment Blockholder	-0.0193 (-3.23)***	-0.0156 (-3.21)***	-0.0170 (-2.37)**	0.0261 (0.67)
Financial Blockholder	-0.00712 (-0.65)	-0.0126 (-1.31)	-0.0180 (-1.24)	0.1473 (2.92)***
Strategic Blockholder	-0.0119 (-1.20)	-0.0066 (-0.79)	-0.0157 (-2.14)**	0.0073 (0.15)
LN Age	0.0395 (18.85)***	0.0370 (40.40)***	0.0302 (3.93)***	0.0023 (0.06)
LN Total Assets	0.0113 (3.64)***	0.0154 (4.51)***	0.0169 (3.83)***	-0.0903 (-4.56)***
LT Debt / Total Assets	-0.2907 (-24.73)***	-0.3031 (-32.05)***	-0.4176 (-5.03)***	-0.6608 (-1.16)
Revenue	0.0000 (0.05)	-0.0000 (0.00)	0.0000 (0.76)	-0.0000 (-1.51)
R&D Costs / Sales	-0.0273 (-4.75)***	-0.0243 (-5.18)***	-0.0242 (-2.51)**	0.1007 (1.23)
Employees	-0.0000 (-2.51)**	-0.0000 (-2.55)**	-0.0000 (-4.32)***	0.0000 (2.73)***
Adjusted R-square	0.3476	0.3682	0.4169	0.1536

T-values are presented in paranteses. Asterix denotes statistical significance at the 1%(***), 5%(**) and 10%(*)-level.

Almost throughout the empirical results, the market ratio Tobin's Q gave inconsistent results compared to previous studies. This may be because of the extraordinary interest rate environment that has been present since the 2007–2008 financial crisis. The interest rate environment affects equities in two ways, through the discount rates and flight for returns. In other words, low interest rates might lead to too high valuations in common cash flow valuation methods, such as the discounted cash flow mode, due to too low discount rates. Secondly low interest rates diminish fixed income returns and has resulted investment flow from fixed income to equities in hope of returns. It can be argued that these two factors that have been present during the time period of this thesis,

lead to too high market valuations and since Tobin's Q is driven by market values, questionable Tobin's Q ratios levels. However, this problem is not in the scope of this thesis and thus is not studied in depth.

7.3. Endogenity

Previous academic literature has indicated that the results may potentially suffer from the problem of endogenity. As Andres (2008) explained it when considering family firms:

"In the case of family firms, the observed relation between family ownership and firm performance might be the result of a reversed causality. Strong performance could prompt families to keep their shares whereas poor performance might be an incentive to give up family control. Thus, the question is whether family ownership improves performance or good performance leads to long-lasting family ownership?" – Andres (2008)

With Finnish data from the NASDAQ OMX Helsinki this problem becomes questionable. Families do have access to excess information compared to other shareholders, however it seems that they are not eager to exploit this position. Listed family firms are older than non-family firms and the family ownership in the companies is stable. These observations of listed family firms diminish the endogenity problem. Family firms see their ownership in the company as more than an investment and seem to stick to them through bad economic times.

8. SUMMARY AND CONCULSIONS

The purpose of this thesis is to find if family ownership in companies has an effect on firm performance and if they outperform other identified major ownership structures in the NASDAQ OMX Helsinki stock exchange during 2007–2013. Families account for one of the most notable controlling shareholder groups in the world and therefore it is in the interest of investors and researchers to find how family owned firms perform compared to other companies. Performance of family owned firms has been theorized for decades but during the last decade the topic has gained the interest of empirical academic research

Firm performance and capital structure are tightly linked through financing ratios. Researchers have theorised several ways during the recent decades of determining the optimal capital structure of the firm. Starting from the original Modigliani and Miller theorems that started the capital structure discussion, academic literature have identified three major distinguished theories of optimal capital structures, these being the trade-off theory, pecking order theory and market timing theory.

Family companies have a unique company structure and they have certain common features. Family firms tend to try to keep the control of the company and centralize the ownership within the family. They do this by implementing different kind of control enhancing mechanisms, most commonly issuing dual classes of shares when going public. Moreover, family owned companies often prefer family members working and managing the firm. Dual classes of shares strengthens families ability to have an impact to the future of the firm even when going public and by managing the company in managerial positions allows the family to control the company also on an operational level. Second, families usually have most of their wealth invested into the company and therefore it makes them more risk averse. Risk aversion can be seen for example in reluctance of accepting more risky R&D projects and avoiding debt. Last, family owned firms also tend to have a longer investment horizon. They see their company more as a heritage to their descendant and are more interested in firm long-term performance than the short term. Therefore theoretically families should perform well in long term.

Because of the features of family owned companies, it is possible to study the performance of the family owned firms from the perspective of agency theory. When ownership and control are separated, agency problems arise between principals and

agents. Managers try to maximize their own wealth, which may not be in line with owner's benefits (agency problem I). This leads to agency costs of monitoring the management and bonding costs to align the interest of owners and managers. Concentrating ownership and control is effective in small and simple companies but when the complexity of the firm grows costs of having incompetent managers exceeds the savings from the concentration of ownership and control. Furthermore, agency problems II suggests that majority shareholders try to access private gains, which harms the minority shareholder. The question is, are the families able to get cost savings in agency costs from combining ownership and control low and do the other agency costs from pursuing for private gains at the expense of the minority shareholder stay at a reasonable level.

Previous empirical research from the US and Western Europe have studied this issue by utilizing financial ratios ROA and Tobin's Q and by comparing family companies and non-family companies within the same industry. The previous empirical evidence has been consistent with their results and that on average family firms outperform other companies. These results have also confirmed the so-called "founder effect". Firms tend to perform better when the founder acts actively in the company. Furthermore, better performance of family owned firms seems to be linked to the shareholder protection laws and corporate governance regulations of the countries. When the shareholder protection laws and corporate governance regulations are on a developed level, it prevents families from pursuing for private benefits on the expense of minority shareholders. Moreover, the descendants and family members should only work for the company if they are competent. This becomes crucial when the family member works in a managerial position.

By utilizing panel data from Finnish listed firms during 2007–2013 and random effects GLS regression, this research shows evidence that listed family owned firms do outperform other firms when measuring performance with accounting performance ratio ROA and when observing against other listed firms in general. Unlike in previous international studies, no evidence for so-called founder effect could be found from listed Finnish family firms. Furthermore, when identifying other controlling shareholder blocks, no evidence of outperformance by family firms could be found.

This thesis opens opportunities for further research. For future research, studying the same firms with a longer data sample as family companies are usually risk averse and have longer investment horizon and therefore the long term profitability and excess

returns of founder family owned companies compared to non-family owned companies should be studied. Also a subset research from the performance during different financial and economic crisis could be done using this new data and would give an opportunity to compare if there is a difference between family firm performance during good and bad times. As better firm performance of family firms has been proven, an extension of studying the market valuations and the possible premium or discount that family ownership would have to the stock prices could be studied. Further, this study should be extended to non-listed family firms in Finland. A significant amount of non-listed firms in Finland can be defined as family firms and currently the performance of these companies has not been studied rigorously enough and utilizing the more sophisticated model compared to Tourunen (2009) should also be done to non-listed family firms.

The results show signs of possible positive association between market based firm performance within financial blockholder group. It can be argued that private equity and other activist long-term investing companies have some similar features as family firms (such as own capital invested in the company) and thus this blockholder could open opportunities for further research.

REFERENCES

Adams, R. B., H. Almeida & D. Ferreira (2009). Understanding the Relationship between Founder-CEOs and Firm Performance. *Journal of Empirical Finance* 16, 136–150.

Anderson, R. C. & D. M. Reeb (2003). Founding-Family Ownership and Firm Performance: Evidence from S&P 500. *The Journal of Finance* 58:3, 1301–1328.

Ang, J. S., R.A. Cole & J.W. Lin (2000). Agency Costs and Ownership Structure. *The Journal of Finance* 55: 1, 81–106.

Andres, C. (2008). Large shareholders and firm performance—An empirical examination of founding-family ownership. *Journal of Corporate Finance* 14, 431-445.

Baker, M., & J. Wurgler (2002). Market timing and capital structure. *Journal of Finance* 57:1, 1–32

Barontini, R. & L. Caprio (2006). The effect of family control on firm value and performance: evidence from Continental Europe. *European Financial Management* 12, 689–723.

Bennedsen, M., K.M. Nielsen, F. Perez-Gonzalez & D. Wolfenzon (2007). Inside the Family Firm: The Role of Families in Succession Decisions and Performance *The Quarterly Journal of Economics* 122:2, 647-691.

Berle, A., G. Means (1932). The Modern Corporation and Private Property. Harcourt, Brace, & World, New York, NY.

Bhattacharya, U. & B . Ravikumar (2001). "Capital Markets and the volution of Family Businesses," *Journal of Business* 74:2, 187–220.

Brealey, R.A., S.C Myers & F. Allen (2011). *Principles of Corporate Finance*. 10th ed. New York, NY: McGraw-Hill, 960 p. ISBN: 978–0–07–353073–4.

Brennan, M. J., & E. S. Schwartz (1984). Optimal financial policy and firm valuation. *Journal of Finance* 39:3, 593–607.

Burkart, M., F. Panunzi, & A. Shleifer (2003). Family Firms. *The Journal of Finance* 58:5, 2167–2201.

Claessens, S., S. Djankov & L.H.P. Lang (2000). The separation of ownership and control in East Asian corporations *Journal of Financial Economics* 58, 81-112.

De Angelo, H. & L. De Angelo (1985). Managerial ownership of voting rights: A study of public corporations with dual classes of common stock. *Journal of Financial Economics* 14:1, 33–69.

Demsetz, H. (1983). The structure of ownership and the theory of the firm. *Journal of Law and Economics* 26, 375–390.

Demsetz, H. & K. Lehn (1985). The Structure of Corporate Ownership: Causes and Consequences. *Journal of Political Economy* 93:6, 1155–1177.

Donaldson, C. (1961). Corporate debt capacity. Harvard University

Ehrhardt, O. & E. Nowak (2003). The Effect of IPOs on German Family–Owned Firms: Governance Changes, Ownership Structure, and Performance. *Journal of Small Business Management* 41:2, 222–232.

Faccio, M. & L.H.P. Lang (2002). The ultimate ownership of Western European corporations. *Journal of Financial Economics* 65, 365–395.

Fama, E. F. & M. C. Jensen (1983). Separation of ownership and control. *Journal of Law and Economics* 26, June, 301–325.

Fama E. F. & M. C. Jensen (1985). Organizational forms and investment decisions. *Journal of Financial Economics* 14:1, 101–119.

Fama, E., & K. R. French (2002). Testing trade-off and pecking order predictions about dividends and debt. *Review of Financial Studies* 15, 1–33.

Graham, J. R., & C. Harvey (2001). The theory and practice of corporate finance: evidence from the field. *Journal of Financial Economics* 60, 187–243.

Harris, M., & A. Raviv (1991). The theory of capital structure. *Journal of Finance* 46:1, 297–356

Isakov, D. & J. P. Weisskopf (2014). Are founding families special blockholders? An investigation of controlling shareholder influence on firm performance. *Journal of Banking & Finance* 41, 1–16.

James, Jr., H. S. (1999). Owner as Manager, Extended Horizons and the Family Firm. *International Journal of Economics of Business* 6:1, 41–55.

Jensen, M. C. & W. H. Meckling (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics* 3:4, 305–360.

Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance and takeovers. *American Economic Review* 76:2, 323–329.

Kane, A., A. J. Marcus, & R. L. McDonald (1984). How big is the tax advantage to debt? *Journal of Finance* 39:8, 41–53.

King, M. R. & E. Santor (2008). Family values: ownership structure, performance and capital structure of Canadian firms. *Journal of Banking and Finance* 32, 2423–2432.

La Porta, R., F. López-de-Silanes & A. Shleifer (1999). Corporate Ownership around the world. *Journal of Finance* 54:2, 471–517.

La Porta, R., F. López-de-Silanes, A. Shleifer & R. Vishny (2002). Investor Protection and Corporate Valuation. *Journal of Finance* 57:3, 1147–1170.

Leary, M. T. & M. R. Roberts (2010) The pecking order, debt capacity and information asymmetry. *Journal of Financial Economics* 95, 332–335

Maury, B. (2006). Family ownership and firm performance: Empirical evidence from Western European corporations. *Journal of Corporate Finance* 12:2, 321–341.

McConaughy, D. L., C. H. Matthews & A. S. Fialko (2001). Founding Family Controlled Firms: Performance, Risk, and Value. *Journal of Small Business Management* 39:1, 31– 49.

McConaughy, D.L., M.C. Walker, G.V. Henderson Jr. & C.S. Mishra (1998). Founding family controlled firms: efficiency and value. *Review of Financial Economics* 7, 1–19.

Miller, D., I. L. Breton-Miller, R.H. Lester & A. Cannella (2007). Are family firms really superior performers? *Journal of Corporate Finance* 13, 829–858.

Mishra, C. S., T. Randøy & J.I. Jenssen (2001). The Effect of Founding Family Influence on Firm Value and Corporate Governance. *Journal of International Financial Management and Accounting* 12:3, 235–259.

Modigliani, F., & M. H. Miller (1958). The cost of capital, corporate finance and the theory of investment. *American Economic Review* 48, 261–297.

Modigliani, F., & M.H. Miller, (1961) Dividend policy, growth, and the valuation of shares. *Journal of Business* 34:4, 411–433

Modigliani, F., & M. H. Miller (1963). Corporate income taxes and the cost of capital: A correction. *American Economic Review* 53, 433–443.

Myers, S. C., & N. S. Majluf (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics* 13, 187–221.

Neubauer, E. & A. Lank (1998). The family business. Its governance for sustainability. *Macmillan Press*, Houndmills and London.

Ross, S. A. (1973). The Economic Theory of Agency: The Principal's Problem. *American Economic Review* 63:2, 134–139.

Pérez-Gonzáles, F. (2001). Does inherited control hurt firm performance? *The American Economic Review* 96:5, 1559–1588.

Schleifer, A. & R. Vishny (1997). A survey of corporate governance, *Journal of Finance* 52, 737–783.

Shyam-Sundera, L. & S. C. Myers (1999). Testing static tradeoff against pecking order models of capital structure. *Journal of Financial Economics* 51:2, 219–244.

Sraer, D. & D. Thesmar (2007). Performance and behavior of family firms: evidence from the French stock market. *Journal of the European Economic Association* 5, 709–751.

Tobin, J. (1969). A general equilibrium approach to monetary theory. *Journal of Money Credit and Banking* 1, Feb, 15-29.

Tobin, J., & W. Brainard (1977). Asset markets and the cost of capital. *Private Values and Public Policies: Essays in Honor of William Fellner*. North-Holland.

Tourunen, K. (2009). *Perheyritykset kansantalouden resurssina: Keskisuurten ja suurten yritysten laajuus ja kannattavuus Suomessa 2000–2005.* Jyväskylä: University of Jyväskylä.

Villalonga, B. & R. Amit (2006). How do family ownership, control and management affect firm value? *Journal of Financial Economics* 80:2, 385–417.

APPENDIX 1: Observed Companies and Classification

Company	Industry	Classification	Age (Years)	Family Firm Market Cap
Afarak Group Oyj	Materials	Financial	30	
Affecto Oyj	Technology	Other	30	
Ahlström Oyj	Materials	Family Firm	164	Large & Mid cap Family Firm
Alma Media Oyj	Consumer services	Strategic	166	
Amer Sports	Consumer goods	Other	65	
Apetit Oyj	Consumer goods	Other	65	
Aspo Oyj	Industrials	Other	86	
Aspocomp Group Oyj	Industrials	Other	36	
Atria Oyj	Consumer goods	Strategic	112	
Basware Oyj	Technology	Other	30	
Biohit Oyj	Health Care	Family Firm	45	Small Cap Family Firm
Biotie Therapies Oyj	Health Care	Other	17	
Cargotec Corp	Industrials	Family Firm	10	Large & Mid cap Family Firm
Cencorp Oyj	Industrials	Strategic	37	
Componenta Oyj	Industrials	Family Firm	97	Small Cap Family Firm
Comptel Oyj	Technology	Other	29	
Cramo Oyj	Industrials	Other	62	
Digia Plc	Technology	Other	25	
Dovre Group	Industrials	Financial	32	
Efore Oyj	Industrials	Financial	40	
Elecster Oyj	Industrials	Family Firm	49	Small Cap Family Firm
Elektrobit Corp	Technology	Other	30	
Elisa Corp	Telecommunications	Governmental	133	
Etteplan Oyj	Industrials	Strategic	32	
Exel Composties Oyj	Industrials	Financial	55	
Finnair Oyj	Consumer services	Governmental	92	
Finnlines Oyj	Industrials	Strategic	68	
Fiskars Oyj	Consumer goods	Other	366	Large & Mid cap Family Firm
Fortum Oyj	Utilities	Governmental	83	
F-Secure Oyj	Technology	Other	27	Large & Mid cap Family Firm
Glaston Corp	Industrials	Other	145	
HKScan Oyj	Consumer goods	Strategic	102	
Honkarakenne Oyj	Consumer goods	Other	57	Small Cap Family Firm
Huhtamäki Oyj	Industrials	Other	95	
Ilkka Yhtymä Oyj	Consumer services	Strategic	109	
Incap Oyj	Industrials	Other	30	

Ixonos Plc	Technology	Other	21	
Karjalan kirjapaino	Consumer goods	Family Firm	141	Small Cap Family Firm
Kemira Oyj	Materials	Govermental	95	
Keskisuomalainen Oyj	Consumer services	Other	144	
Kesko Oyj	Consumer services	Strategic	75	
Kesla Oyj	Industrials	Family Firm	55	Small Cap Family Firm
Kone Corporation	Industrials	Family Firm	107	Large & Mid cap Family Firm
KoneCranes Oyj	Industrials	Financial	82	
Lassila Tikanoja Oyj	Industrials	Financial	110	
Lemminkäinen Oyj	Industrials	Family Firm	105	Large & Mid cap Family Firm
Marimekko Oyj	Consumer goods	Other	64	
Martela Oyj	Consumer goods	Family Firm	70	Small Cap Family Firm
Metsa Board	Materials	Strategic	29	
Metso Oyj	Industrials	Govermental	73	
NEO industrial	Industrials	Strategic	18	
Neste Oil	Oil & Gas	Govermental	67	
Nokia Corp	Technology	Other	144	
Nokia Tyres	Consumer goods	Other	117	
Nurminen Logistics	Industrials	Family Firm	129	Small Cap Family Firm
Okmetic Oyj	Technology	Other	30	
Olvi Oyj	Consumer goods	Family Firm	137	Large & Mid cap Family Firm
ORAL hammaslääkärit	Health care	Other	33	
Oriola Kd	Health care	Other	108	
Orion Oyj	Health care	Other	98	
Outokumpu Oyj	Materials	Govermental	105	
Outotec Oyj	Industrials	Govermental	75	
PKC Group Oyj	Industrials	Other	46	
Ponsse Oyj	Industrials	Family Firm	45	Large & Mid cap Family Firm
Poyry Oyj	Industrials	Financial	57	
QPR Software	Technology	Other	24	
Raisio Oyj	Consumer goods	Strategic	76	
Ramirent Oyj	Industrials	Financial	60	
Rapala VMC	Consumer goods	Strategic	79	
Rautaruukki Oyj	Materials	Govermental	55	
Raute Oyj	Industrials	Family Firm	107	Small Cap Family Firm
Revenio Group	Health care	Other	14	
Saga Furs Oyj	Consumer goods	Other	77	
Sanoma Oyj	Consumer services	Family Firm	126	Large & Mid cap Family Firm
Solteq Oyj	Technology	Family Firm	33	Small Cap Family Firm

Soprano Oyj	Technology	Family Firm	31	Small Cap Family Firm
SRV group plc	Industrials	Family Firm	28	Large & Mid cap Family Firm
SSH COMM	Technology	Family Firm	20	Small Cap Family Firm
Stockmann	Consumer services	Other	153	
Stonesoft Oyj	Technology	Other	25	
Stora Enso Oyj	Materials	Govermental	143	
Suominen Oyj	Consumer goods	Financial	117	
Takoma Oyj	Industrials	Financial	8	
Talentum Oyj	Consumer services	Strategic	77	
Tecnotree Oyj	Technology	Other	37	
Teleste Oyj	Technology	Financial	61	
TeliaSonera Oyj	Telecommunications	Other	98	
Tieto Oyj	Technology	Govermental	47	
Trainers House	Technology	Family Firm	21	Small Cap Family Firm
Tulikivi Oyj	Industrials	Family Firm	122	Small Cap Family Firm
Turvatiimi Corp	Industrials	Financial	11	
Upm kymmene	Materials	Other	143	
Uponor Plc	Industrials	Other	97	
Vaahto Group	Industrials	Financial	141	
Vacon Oyj	Industrials	Financial	22	
Vaisala Oyj	Industrials	Family Firm	79	Large & Mid cap Family Firm
Viking Line	Consumer services	Other	56	
Wärtsilä	Industrials	Financial	181	
Wulff Group	Industrials	Family Firm	125	Small Cap Family Firm
YIT Oyj	Industrials	Govermental	103	